Civilizations of Africa

The Ancient World

THE ANCIENT WORLD

CIVILIZATIONS OF AFRICA

Volume 1

Set Contents

The Ancient World
Vol. 1 *Civilizations of Africa*
Vol. 2 *Civilizations of Europe*
Vol. 3 *Civilizations of the Americas*
Vol. 4 *Civilizations of the Near East and Southwest Asia*
Vol. 5 *Civilizations of Asia and the Pacific*

The Ancient World

Civilizations of Africa

Volume 1

GENERAL EDITOR
Eric Cline, Ph.D.
The George Washington University

CONSULTING EDITOR
Sarolta Takács, Ph.D.
Rutgers University

SHARPE REFERENCE
an imprint of M. E. Sharpe, Inc.

DEVELOPED, DESIGNED, AND PRODUCED BY DWJ BOOKS LLC
Principal Author: Karen H. Meyers

SHARPE REFERENCE

Sharpe Reference is an imprint of M.E. Sharpe, Inc.

M.E. Sharpe, Inc.
80 Business Park Drive
Armonk, NY 10504

© 2007 by M.E. Sharpe, Inc.

All rights reserved. No part of this publication may be reproduced, stored in
a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the copyright holders.

Library of Congress Cataloging-in-Publication Data
The ancient world / Sarolta Takács, general editor; Eric Cline, consulting editor.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-7656-8082-2 (set : alk. paper)
1. Civilization, Ancient--Encyclopedias. 2. History, Ancient--Encyclopedias.
I. Takács, Sarolta A. II. Cline, Eric H.
CB311.A535 2007
930.103--dc22 2006101384

Printed and bound in Malaysia
The paper used in this publication meets the minimum
requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials,
ANSI Z 39.48.1984

TI (c) 10 9 8 7 6 5 4 3 2 1

All images provided by Getty Images and the following:
background image: Tariq Dajani/The Image Bank
inset images (left to right): Bridgeman Art Library; Jochem D. Wijnands/Taxi;
Eric Meola/The Image Bank; Bridgeman Art Library

Contents

List of Illustrations vii

Topic Finder ix

Preface xi

The Cradle of Humanity xiii

Map of Ancient Africa xviii

Agriculture 1

Turning Point: Irrigation 3

Akhenaten 5

Alexandria 6

Animism 7

Archeological Discoveries 8

GREAT LIVES: *The Leakeys* 9

TURNING POINT: *The Discovery of Lucy* 11

Art and Architecture 14

LINK IN TIME: *Pyramids: Egyptian and Mayan* 16

Atlas Mountains 18

Axum 19

Bantu Migration 21

Benin 23

LINK IN TIME: *The Interesting Life of Olaudah Equiano* 24

Berbers 25

Carthage 28

Culture and Traditions 30

LINK TO PLACE: *Masks in Africa and the Americas* 34

Egypt 35

GREAT LIVES: *Cleopatra* 38

GREAT LIVES: *Hatshepsut* 39

Ghana 39

LINK IN TIME: *Ancient Ghana and Modern Ghana* 40

Giza 42

Great Zimbabwe 43

LINK IN TIME: *European Finding of Great Zimbabwe (C.E. 1871)* 43

Greek Colonies 45

Ibn Battuta 48

Kongo Empire 49

LINK TO PLACE: *Africa's First Roman Catholic Dynasty* 51

Kush 51

Language and Writing 54

LINK IN TIME: *The Rosetta Stone* 56

TURNING POINT: *The Invention of Papyrus* 59

Libya 60

Mali 62

GREAT LIVES: *Mansa Musa* 64

Mauretania 64

Monomutapa Empire 65

Myths and Epics 66

LINK TO PLACE: *African and American Flood Myths* 67

Nile River 70

LINK TO PLACE: *Searching for the Source of the Nile* 71

Nok People 71

Nubia 73

Olduvai Gorge 76

Paleobiology 77

Religion 79

LINK TO PLACE: *Ethiopian Jews* 81

Sahara 84

Salt Trade 85

LINK IN TIME: *Ancient and Modern Salt Production* 86

Sheba, Queen of 88

Slavery 89

Society 90

LINK TO PLACE: *Initiation Rites: The Xhosa and the Lakota* 93

Songhai Empire 94

Stone Circles 96

Technology and Inventions 97

Timbuktu 102

LINK TO PLACE: *The Great Mosques* 104

Tools and Weapons 104

ANCIENT WEAPONS: *Throwing Knives* 106

Yoruba 108

LINK IN TIME: *Santería* 109

Glossary 111

Selected Bibliography 115

Index 119

List of Illustrations

Time Lines

Ancient World Time Line — Endpapers

Rise and Fall of Alexandria — 7

Archeological Discoveries — 9

Rise of Carthagenian Rule — 29

Kingdoms of Ancient Egypt — 37

Language and Writing — 59

Rise of Nubia — 74

Songhai Empire, C.E. 900–1600 — 95

Technology and Inventions — 100

Maps

Ancient Africa, ca. 2000 B.C.E. — xviii

Major Archeological Sites — 10

Bantu Migrations, ca. 3000 B.C.E.-C.E. 800 — 22

Influence of Geography on the Rise of Civilization — 31

Egypt, ca. 1530–1070 B.C.E. — 36

Ancient Ghana, ca. C.E. 1000 — 41

Independent Greek Colonies — 46

Major Linguistic Groups — 55

Routes of the Ancient Salt Trade — 87

The Spread of Iron Working, ca. 600 B.C.E.–C.E. 400 — 98

Photos

Ancient farm tools 2

Death Mask of King Tutankhamen 12

African cave paintings 15

Ceremonial masks 17

Berber village 26

Masks 33

The Great Pyramid 38

Ruins of Great Zimbabwe 44

Nkangi: Kidifu (Kongo) crucifix 50

Rosetta Stone 57

Egyptian hieroglyphics 58

Mansa Musa 63

Nok sculpture 72

Tomb painting 80

Queen of Sheba 88

Masai warrior 91

Artificial toe 99

Djingareyber mosque 103

Bronze tools 105

Topic Finder

Civilizations and Peoples

Alexandria
Axum
Berbers
Carthage
Egypt
Ghana
Giza
Great Zimbabwe
Greek Colonies
Kongo Empire
Libya
Mali
Mauretania
Monomutapa Empire
Nok People
Nubia
Songhai Empire
Timbuktu

Culture and Language

Animism
Archeological Discoveries
Art and Architecture
Culture and Traditions
Language and Writing
Myths and Epics
Olduvai Gorge
Paleobiology
Slavery
Society
Stone Circles

General Topics

Agriculture
Archeological Discoveries
Art and Architecture
Culture and Traditions
Language and Writing
Myths and Epics
Nile River
Olduvai Gorge
Religion
Salt Trade
Slavery
Society
Technology and Inventions
Tools and Weapons

Notable Figures

Akhenaten
Cleopatra (*see* Egypt)
Hatshepsut (*see* Egypt)
Ibn Battuta
Leakey, Louis and Mary (*see* Archeological Discoveries)
Mansa Musa (*see* Mali)
Sheba, Queen of

Places

Alexandria
Axum
Carthage
Egypt
Ghana
Giza
Great Zimbabwe
Kongo Empire
Libya
Mali
Mauretania
Monomutapa Empire
Nile River
Nubia
Olduvai Gorge
Songhai Empire
Timbuktu

Periods and Events

Archeological Discoveries
Olduvai Gorge
Salt Trade
Stone Circles

Religion

Animism
Religion
Stone Circles

Society and Way of Life
Agriculture
Culture and Traditions
Nile River
Olduvai Gorge
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

War and Military Affairs
Alexandria
Carthage
Egypt
Nubia
Songhai Empire
Tools and Weapons

Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

The Cradle of Humanity

Welcome to *The Ancient World: Civilizations of Africa*. As you explore the pages of this volume, you will encounter the wonders and mysteries of an ancient land. Africa has been called the "cradle of humanity" by **archeologists** and historians because it is believed to be the place where, about 300,000 years ago, human beings first evolved from humanlike creatures, known as hominids. Africa was a very different place 300,000 years ago. Where there are now deserts, there were once vast grasslands, or savannahs, on which scientists believe the first humans emerged. So few trees grew on these ancient savannahs that some archeologists believe hominids actually began to walk upright so that their backs would not be exposed directly to the sun. When using *The Ancient World: Civilizations of Africa*, readers might keep in mind this vivid, prehistoric picture.

PREHISTORY

One hundred and fifty thousand years ago, Africa was the only place on earth occupied by modern humans. Until the 1950s, most archeologists believed that humans first evolved from their hominid ancestors somewhere in Asia. The husband and wife team of Louis and Mary Leakey, famous archeologists, believed otherwise, however, and worked tirelessly in the hot sun for decades in the Great Rift Valley in Tanzania to prove that they were right. Eventually, discoveries by the Leakeys, Donald Johanson, and others led to the theory that humanity originated in Africa and from there migrated around the world. These fascinating stories are told in the article on "Archeological Discoveries" in this volume.

In 1984, German anthropologist Günter Bräuer published his "Afro-European sapiens hypothesis," in which he concluded that humans evolved in East Africa; he then developed a model of how and where these first people migrated. Bräuer's thesis was supported by the research of geneticists who analyzed the **mitochondrial DNA** of people around the world and concluded that there were more mutations among Africans than any other group. From this, the researchers were able to confirm an African origin, or birth, for humanity. **Linguists**, meanwhile, have found that patterns of language diversification closely match patterns of genetic diversification, adding yet another layer of proof to the theory. There seems to be little room for doubt that the first mother of the human race was African.

THE LAND AND ITS PEOPLE

History is also geography. That is, what occurs over time in a particular place is deeply influenced by location—how high the mountains are, where sources of water can be found, where the trees grow. As you read through this volume, in entries on topics such as the "Nile River," the "Salt Trade," and "Olduvai Gorge," you will see clearly how the landscape of Africa helped shape its history and its people.

Africa is the second-largest continent in the world; at 11,699,000 square miles (30,300,270 sq km) in area it is smaller only than Asia. It is a land of tremendous contrasts. Its largest country, Sudan, covers 967,490 square miles (2,505,790 sq km); its smallest nation, the Seychelles, is a mere 4,363 square miles (11,300 sq km) in area. To put those numbers in perspective, America's largest state, Alaska, is 656,425 square miles (1,700,133 sq km)—and the Seychelles is about the size of Connecticut.

The geographic features of Africa are equally various and full of contrast and contradiction. Twenty-five percent of the continent is desert, including the Sahara, the largest non-arctic desert in the world; the Kalahari; and the Namib, one of the hottest and driest places on earth. At the edges of the desert is the African *sahel*, an Arabic word that means "border" or "edge." The sahel is primarily semi-arid grassland where rain is intermittent. Unfortunately, the deserts are rapidly overtaking the sahel, at the rate of about 100 miles (161 km) each year.

Stretching like a belt across the middle of the continent is the second largest tropical rainforest in the world, smaller only than the Amazon rainforest. Africa is also home to savannahs that extend along both coasts of the continent, south of the rainforests. The savannahs are home to much of the wildlife commonly associated with Africa: elephants, giraffes, lions, hyenas, zebras, hippos, cheetahs, and ostriches.

The geographic divisions of the continent and the extremes of land formation and climate have had significant effects on African history. The history of Africa as a whole, and of individual sections of the continent, is inextricably linked to the geography. Egypt and its history, for instance, are very different from the regions and history of Mauretania, Mali, and Libya. Nubia was close enough to Egypt to be conquered and to conquer Egypt in turn, but since it was very different geographically, Nubia had a very different history. Likewise, areas with port cities, convenient for foreign travel and trade, developed in ways that were different from more isolated, or out-of-the-way, places.

The major civilizations that arose in Africa tended to be located along the coasts, north of the tropical rainforests and to the east and west of the deserts. You can read about some of these coastal empires in this volume, in the articles on "Egypt," "Kush," "Nubia," "Axum," "Kongo," "Mali," "Ghana," and "Monomutapa." The center of the continent was only sparsely settled, and the ethnic groups that lived there had little contact with the outside world, leading ultimately to great differences and diversity in the continent's population as a whole.

EARLY PEOPLES AND CIVILIZATIONS

Also influenced by its surroundings, one of the world's earliest complex civilizations arose in Africa—that of Egypt, which endured from 3100 B.C.E. to C.E. 395. The valley of the great Nile River, the longest in the world and one of the few rivers to flow from south to north, provided the ideal setting for the growth of this amazing culture.

The ability to grow surplus food in the rich black soil of the Nile Valley required administrators to store and distribute seed and food, leading eventually to a complex **bureaucracy** and a stratified society led by pharaohs, kings who claimed to be the descendents of gods and who ordered the construction of huge pyramidal tombs as monuments to themselves. In the Great Pyramid at Giza alone, more than two million blocks of stone were used in building. You can read about some of the most famous Egyptian pharaohs in this volume, including Tutankhamen, Cheops, Akhenaten, Hatshepsut, and Cleopatra. The need to keep track of stored food and the complex system of canals and dykes that allowed Egypt to harness the annual flooding of the Nile also led to the development of the crucial skill of writing.

Egypt, however, was not the only great civilization to arise in Africa. South of Egypt was Nubia. Deeply influenced by its Egyptian neighbors, this great African civilization developed its own religion, government, and art, and, at one time, ruled over Egypt itself. Other, later kingdoms—each of which is discussed in an entry in this volume—arose in Ghana, Mali, Monomutapa, Kongo, Axum, and Great Zimbabwe.

The northern coast of the African continent was settled by the ancient Mediterranean powers of Phoenicia, Greece, and Rome, which at times vied with one another for control of the region. Carthage, initially founded by Phoenicians in about 800 B.C.E., battled both Greeks and Romans for control of various Mediterranean seaports. After hundreds of years and three wars, called the Punic Wars after the Roman word for Phoenicia, Rome destroyed Carthage in 146 B.C.E. and built a great Roman city—also called Carthage—in its place. Rome also took over the Phoenician city of Leptis Magna, and it too became a major city of the Roman Empire.

The Greeks founded several cities in Africa, including Cyrene, in what is now Libya, a city that was established in about 630 B.C.E. About 300 years later, Alexander III, the Great, conquered Egypt and founded the city of Alexandria, which was eventually conquered by Rome in 31 B.C.E. The dominant power in the struggle for control of northern Africa in ancient times was Rome, which dominated the region until the sixth century C.E., when much of North Africa was overtaken by Arab invaders. If you want to learn more about Greek, Roman, and Phoenician influences on Africa, read the articles in this volume on "Greek Colonies," "Carthage," "Libya," and "Alexandria."

EXCHANGE AND ENCOUNTER

Africa was also shaped profoundly by influences from Asia and the Middle East. From the time of the

Egyptian pharaohs, the Indian Ocean acted as a highway for commerce between Africa and the lands surrounding the Persian Gulf. By the first millennium C.E., this ocean route had become one of the main routes by which Muslim, Chinese, and Indonesian influences reached Africa.

Arab Conquest

It was during the lifetime of the prophet Muhammad that the first Muslims came to Africa. It is said that a small group escaping persecution in Mecca fled to Ethiopia in about C.E. 615. There they were granted protection and allowed to live undisturbed. Seven years after Muhammad's death in C.E. 632, the Muslim Arab general Amr ibn al-A'as invaded Egypt and began the military expansion of the Umayyad family, who came to rule the Mediterranean and Middle East from the Iberian Peninsula to Pakistan. As Islam spread west from Alexandria in Egypt, many Christians took refuge in parts of Ethiopia and Nubia.

In general, Muslim invaders and traders did not force the native populations to convert to Islam. The religion was tolerant of traditional African values and of polygamy, which made Islam a more appealing choice for most Africans than Christianity. Islam had a particularly powerful influence on northern Africa, as it imposed a more consistent social order and developed strong governments that weakened ethnic loyalties. From North Africa, beginning in about C.E. 700, Islam expanded into the Iberian Peninsula and what is now Portugal and Spain. Muslim traders also expanded south into sub-Saharan Africa, in search of gold and other trade routes.

The rulers of the Ghana Empire (C.E. 600–1200) and Malian Empire (C.E. 800–1500) were converts to Islam. Malian kings Mansa Musa and his brother Mansa Suleyman oversaw the construction of many mosques in Africa, built in a uniquely African style. The great city of Timbuktu became a center of Muslim learning. Trans-Saharan routes followed by salt and gold traders also helped the spread of Islam through portions of West Africa. You can read more about the influence of Islam in Africa in articles about "Ghana," "Mali," "Timbuktu," "Songhai," and the "Salt Trade."

Readers should remember, too, that throughout most of the Middle Ages, Islamic nations were considerably more modern than their Christian counterparts. At that time, Muslims were tolerant of other religions and were quite advanced in all forms of learning, especially mathematics and astronomy. Unquestionably, northern Africa benefited in many ways by years of Islamic rule.

Today there are an estimated 426 million Muslims in Africa, comprising approximately 48 percent of the population of 877 million. The religion continues to gain adherents and to exert a major influence on daily life on the continent.

Indian Basin Trade

Artifacts, including Ming Dynasty pottery from China and glass from Persia, were discovered at Great Zimbabwe, an ancient city in what is now the nation of Zimbabwe. These discoveries make it clear that there was an extensive trading network from China and Persia into Africa more than a thousand years ago, well before the arrival of Europeans. Double-ironed gongs made in the ancient Katanga province of the modern Democratic **Republic** of the Congo have also been found in Great Zimbabwe, indicating that this city was the nexus of trade extending from the interior of the continent across the Indian Ocean to the Middle East and East Asia.

Because the Indian Ocean is calmer than the Atlantic and Pacific, it was relatively easy for traders and even settlers to cross from Asia to Africa. The strong winds of monsoons allowed ships to sail west early in the season, wait until the winds changed, then return to the east. These climatological factors allowed people from Indonesia to settle in Madagascar off the east coast of Africa and contributed to the growth and development of East African nations.

In the early fifteenth century C.E., Chinese explorers sailed along the east coast of Africa and could even draw an accurate map of the west coast, suggesting that they might have circumnavigated the continent well before the Portuguese explorer Vasco Da Gama. In 1415, the emperor of China was

presented with a giraffe from Africa. A silk painting memorializes the occasion.

Because they left no written records, no one knows what happened to Great Zimbabwe or why this great trading center was deserted and allowed to fall into ruin.

EUROPEAN INTEREST

In 1472, Portuguese sailors arrived on the Gold Coast of Africa in modern Ghana, where they built El Mina ("the mine"), a city that contained the first buildings in Africa constructed with materials imported from Europe. Thus, Portugal became the first European nation to establish itself on the African continent.

For 200 years, from 1440 to 1640, the Portuguese had a monopoly on the slave trade. In that period, Portugal transported more than 4.5 million Africans, less than one-third of the approximately 15 million Africans who were eventually taken before slavery was abolished. Because the Portuguese had a major presence on the west coast of Africa, most of the slaves that were transported to the Americas came from that part of the continent.

The geography of the slave trade can be roughly depicted by a triangle connecting Europe to the west coast of Africa and Africa to the east coast of the Americas. From Europe came the goods to be traded for slaves; then slaves were transported to the Americas, where raw materials were loaded on the empty ships and brought back to Europe. In the eighteenth century C.E., the British also traded goods for slaves, transporting more than 2.5 million people across the Atlantic. You can read about the early years of the slave trade in an article in this volume entitled "Slavery."

The impact of the slave trade on Africa was devastating. The violence perpetrated by African traders on other Africans begat a legacy of violence that can still be seen today. The decimation of the population, too, has had a lingering impact, destroying some cultures and destabilizing others. An economic system based on slavery replaced the older traditional systems, making it more profitable to sell one's neighbor than trade with him.

AFRICA IN TRANSITION

The devastation of the slave trade was a prelude to the **subjugation** of modern Africa to European colonial rule. Throughout the nineteenth century, a host of European nations—England, France, Germany, Spain, Portugal, and Belgium—raced to establish control over Africa. Colonial powers removed wealth from Africa but did not reinvest in the continent. Profits were exported, leaving few funds for the construction of roads or for education or healthcare. Industrialization improved life for many in the Americas and Europe, but Africa was left behind.

Colonialism also left a legacy of ethnic strife in much of Africa, which persists to the present day. In establishing their African colonies, European powers drew boundaries that ignored ethnic loyalties and rivalries, and that cut across related language groups and already existing political organizations. As a result, the independent nations that eventually arose from these colonies have been plagued by internal divisions between historically hostile ethnic and linguistic groups forced to share a common state.

European imperialism not only left Africa without the infrastructure that might have allowed the continent to develop economically but also left a legacy of political violence. The colonial powers that allowed some form of self-rule tended to elevate "strong men" to positions of power they would never have attained without the backing of their European friends. The history of modern Africa is marred by the military rule of such men.

CONNECTIONS TO TODAY

Badly wounded by slavery and colonialism, Africa has also been slowed in its technological and economic progress by its very geography. Jared Diamond, in his Pulitzer Prize–winning work *Guns, Germs, and Steel* (1997), discusses why certain parts of the world developed technologically and economically while others lagged behind. Rejecting outright the idea that poorer nations are held back because their people are in some way inferior, he presents a variety of alternative explanations, many pertaining to the geography and the distribution of animal and plant life.

One geographic factor that resulted in a disadvantage on the African continent, according to Diamond, is the fact that it is oriented north-south rather than east-west, like Eurasia. It is this fact, says Diamond, that allowed Europeans to "engulf" Africa. He maintains that Europe's technological superiority arose ultimately from its ability to produce a surplus of food and adds that

> food production was delayed in sub-Saharan Africa (compared with Eurasia) by Africa's paucity of domesticatable native animal and plant species, its much smaller area suitable for indigenous food production, and its north-south axis, which retarded the spread of food production and inventions.

While other continents had cows and goats, which were easily domesticated, Africa had buffalo, zebra, rhinoceroses, and hippos. In addition, Africa had less biodiversity in plant life than Eurasia, making it much harder to feed large populations.

Perhaps the most important factor in inhibiting food production was Africa's north-south orientation. In Europe, a newly domesticated plant could easily be moved east or west and find a similar climate in which to thrive. In Africa, a newly domesticated plant had to succeed in many very different climate zones. Few could do so. According to Diamond,

> As one moves along a north-south axis, one traverses zones differing greatly in climate, habitat, rainfall, day length, and diseases of crops and livestock. Hence crops and animals domesticated in one part of Africa had great difficulty in moving to other parts.

Technology, says Diamond, was also impeded by the vast differences in geography, making it difficult for the spread of new ideas.

Thus, Africa today is clearly a product of both its history and its geography. It is a land of great natural beauty and wealth, and a place that provides a superior view of the human ability to adapt to nature's diverse environments. It is a land whose traditional cultures, while threatened, have much to teach the world about the importance of kinship and cooperation. At the same time, Africa faces enormous economic and political challenges, many of which are related to its past—especially its slave trade and colonialism—and many of which are connected to its geography.

Today Africa is home to more than 800 million people who live in 54 different countries and speak more than 800 different languages. Although there are only 54 nations, Africans are divided into literally thousands of ethnic groups, which helps explain some of the political unrest and warfare that has plagued the continent in modern times. National borders were drawn by colonial powers for their own purposes, often disregarding ethnic loyalties. Today, people who are labeled as countrymen may cherish centuries-old hatreds of one another, leading at times to bloody battles for power.

Ironically, Africa is a continent rich in natural resources, with vast stores of diamonds, gold, chromium, coal, and oil. Yet 21 of the 30 poorest countries in the world are located in Africa. While there is great wealth to be had and many have profited from Africa's natural resources, the vast majority of the population is impoverished, due primarily to the tremendous political unrest and the failure of democracy to flourish on the continent. Despite its long and rich history, Africa today is a continent in crisis. With the help of this encyclopedia, it is the hope of the writers and editors that readers will come to understand the history of this vast land and its people.

FURTHER READING

Connah, Graham. *Forgotten Africa: An Introduction to Its Archaeology*. London: Routledge, 2004.

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1997.

Harris, Joseph E. *Africans and Their History*. Rev. ed. New York: Penguin, 1998.

Reader, John. *Africa: A Biography of the Continent*. New York: Knopf, 1998.

Richardson, Hazel. *Life in Ancient Africa*. New York: Crabtree, 2005.

Eric H. Cline, Ph.D.
General Editor
Karen H. Meyers, Ph.D.

Map of Ancient Africa

ANCIENT AFRICA, CA. 2000 B.C.E.

So much of the history of Africa is related to its geography. It is a huge continent, large enough to hold the United States, China, and India, with room to spare. Moreover, because of its pronounced north-south orientation, the vast difference in temperature, rainfall, and soil from north to south prevented the easy dissemination of domesticated plants and animals, which in turn prevented the development of large, sophisticated civilizations south of the Sahara. Africa is the most tropical of all the continents, with fully half its total area below the equator, another factor that limited the development of complex societies in the southern portion of the continent. It is also the most arid of all the continents, which helps to explain why so many of its great civilizations grew up along its major rivers: Egypt and Kush along the Nile; Nok, Songhai, Ghana, Benin, and Mali along the Gambia; and Great Zimbabwe between the Zambia and Limpopo.

A

Agriculture

The peoples of ancient Africa developed techniques to domesticate animals and cultivate plants for food. Until the advent of agriculture, in about 6000 B.C.E., these ancient peoples lived in small hunter-gatherer societies that subsisted by killing game and collecting wild foods such as berries, fruit, or grains. Domestication of plants and animals gave humans much greater control over their food supply, which led to the growth of larger societies and the development of complex urban civilizations.

BEGINNINGS OF AGRICULTURE IN AFRICA

Evidence found at Nabta Playa, west of the Nile River in what is now the Sahara Desert, indicates that humans were cultivating sorghum, a tropical cereal grass, some 8,000 years ago. At that time, the Sahara was grassland. However, about 7,000 years ago, the region began to dry out and the people who lived there were forced to leave, scattering in all directions. Those who went east settled by the Nile River and continued to develop an agricultural economy.

Between 6000 and 1000 B.C.E., several other areas in Africa began to rely on agriculture, rather than hunting and gathering. These areas included parts of North Africa, the grasslands of West Africa, and the Ethiopian highlands.

Egyptian Agriculture

Because of extensive written records and tomb paintings, scholars know a great deal more about Egyptian and Nubian agricultural practices than they do about those of other ancient African cultures. Funerary paintings show farmers tilling the land, girls threshing wheat, and young men picking grapes—one can actually see some of the tools and methods used. Although irrigation became vital to the development of intensive farming along the Nile River, it was not until around 3500 B.C.E. that a system of canals, dikes, and sluices was constructed to store and disperse water. Before that time, people depended entirely on the annual flooding of the Nile, which left a rich, black deposit of silt along the shores of the river.

The Nile valley was under water from July through December, a season the Egyptians called *Aketo*. From December to March, a season called *Peleto*, the land drained and, when it was firm enough to walk on, farmers plowed the fields, sometimes with the aid of oxen. Plowing in Egypt was relatively simple work, since the flooding deposited the good soil on top; the only thing left to do was break it up. Farmers would then scatter seed by hand, after which goats and donkeys were brought in to walk the fields to tamp down the seeds so birds could not eat them.

Here a man uses a device called a *shadouf* to take water from the Nile River to irrigate his fields. This is the same tool that was used by the ancient Egyptians to perform this task. (Erich Lessing/Art Resource, NY)

The period from March to July, *Syumuu*, was harvest time. The grain was cut down with sickles and removed from the fields to the threshing area on the backs of donkeys. Threshing is the process by which the grain is separated from the chaff, or seedpod, and other inedible parts of the plant. This was done by placing the grain on the ground in a dry area and having donkeys or cows trample on it, separating out the grain. Then women used wooden pitchforks to toss the grain in the air, further separating the light chaff, which was blown away, from the heavier grain, which fell to the ground. Then the grain was stored.

Agriculture Outside Egypt

The Nile is not the only African river whose annual flooding provided rich soil for agriculture. The Niger River basin in West Africa also experiences a yearly inundation that makes it ideally suited for agriculture. West African rice, *oryza glaberrima*, flourishes on the banks of the river, as do millet and sorghum. When the river recedes after flooding, there is also ample grass for herds to graze.

The grasslands of Africa were uniquely suited to herding animals, and there is evidence that domesticated livestock were present in the Sahara region 9,000 years ago. With the domestication of animals and the invention of pottery to carry food and hold milk, mothers could feed babies cereal and cow's milk, shortening the time of nursing. Since nursing mothers tend not to conceive, nursing for shorter periods of time eventually led to increased populations, which in turn led to agricultural production. The more people there were, the more food was needed.

In the north, the earliest animals and plants to be domesticated were goats, sheep, cattle, wheat, barley, olives and dates, many of which came to Africa from Southwest Asia. In the grasslands to the west, millet, black-eyed peas, and okra were among the early crops. In Ethiopia, people grew a banana-like fruit—which may have come from Indonesia—millet, and coffee, as well as grains called *tef* and *enset*. In the area that is now Nigeria, yams, kola nuts, and palm nuts were cultivated. It is believed that cotton, sorghum, watermelon, kola nuts, and coffee all originally were domesticated in Africa.

GEOGRAPHICAL REGIONS AND WEATHER

Africa is a vast continent with many different regions and climates, which are suited for a variety of crops and different methods of agriculture. In general, the land and climate have been relatively stable for the past 2,000 years.

TURNING POINT

Irrigation

Although almost no rain falls in Egypt, the area surrounding the Nile River has been the source of agricultural plenty for thousands of years. This is because ancient Egyptians learned the basic principles of irrigation: how to control the annual flooding of the valley, how to direct water from its natural course to adjacent farmland, and how to trap and store floodwater for use during the dry season.

Early Egyptian farmers exploited a natural system of canals that extended from the Nile. They dredged the canals each year to keep them from clogging and built up levees to prevent overflow. As early as 5000 B.C.E., however, Egyptians began to build wider canals that extended at right angles from the river to draw water into adjacent fields. The result was the world's first irrigation system. Among the earliest official government positions mentioned in Egyptian documents is that of canal digger.

By the second millennium B.C.E., Egyptian engineers were building reservoirs in which water could be stored for use in the dry season. The first reservoir in the world, likely constructed during the Twelfth Dynasty (1991–1782 B.C.E.), was located at Al Fayyum, about 15 miles (24 km) west of the Nile in the desert. During flood season, this low-lying desert region would become a lake. Then, as irrigation was needed for farming, dikes were opened to allow water to flow into the fields.

In the sixteenth century B.C.E., Egyptian farmers invented a device called a *shaduf*, which allowed them to water fields at higher elevations, out of reach of both the natural flood levels and the canals. The shaduf functions on the same principle as a lever. It consists of a vertical pole and a horizontal pole attached to it that can move up and down. The short end of the horizontal pole, or boom, remains positioned over land; at the bottom is a heavy counterweight. The longer end, to which a bucket is attached, extends out over the river or other body of water. To operate the shaduf, the farmer uses a rope to lower the bucket into the water. Then, when the bucket is full, the farmer lets go of the rope and allows the counterweight to lift the bucket. With the ability to bring water to higher elevations—referred to as the science of **hydraulics**—the Egyptians were able to raise crops during winter and summer alike, substantially increasing their output and surplus grain. The latter, in turn, could be traded for other goods.

Around 325 B.C.E., the Egyptians developed the waterwheel, which substantially increased the amount of water that could be moved to higher elevations. A large wooden wheel with pottery jars fastened around its circumference could lift as much as 75,000 gallons (275,000 liters) of water in 12 hours.

The Sahara in the north and the Kalahari in the south are deserts in which few plants can grow. The coastal region of North Africa along the Mediterranean, called the Tell, has warm summers and rainy winters, with a climate and crops similar to those in countries such as Greece and Italy. This fertile land is bordered by mountains and arid plateaus to the south.

A region of grassy plains, or savannahs, called the *sahel*, borders the Sahara to the south and extends across the entire continent from east to west. *Sahel* is an Arabic word that means "coast"; it refers to the fact that the region forms a "coastline" between the desert and the dense tropical rainforests to the south.

Several aspects of African geography and climate are not conducive to large-scale agriculture. For example, crops tend to do better with a steady supply of water, but many parts of Africa experience a rainy season followed by a dry season. More than half of the African continent is too dry for successful cultivation; indeed, Africa includes about one-third of all

of the arid land in the world. Other parts of the continent are too wet and disease-ridden to allow for permanent settlement and the cultivation of crops. Africa's tropical regions are too densely forested for agriculture and are home to pests such as the tsetse fly, which carries a deadly disease called trypanosomiasis, or sleeping sickness; blackflies, whose bites cause a disease known as river blindness (onchocerciasis); and mosquitoes carrying malaria. In semitropical climates, however, yams, bananas, and plantains have been successfully cultivated.

TOOLS AND IMPLEMENTS

Ancient African farmers used a variety of tools to help plant and harvest their crops. Egyptian farmers had wooden hoes, which were made of two pieces of wood connected by a length of rope and which required the user to work bending down, a back-breaking effort. Early sickles were curved wooden implements fitted with flint blades, used to cut down stalks of wheat and other plants. Later sickles were made of copper, then bronze. Stone axes were used to fell trees, and wooden shovels were used to separate wheat from chaff.

One of the most important Egyptian farming tools was the calendar, which allowed Egyptian farmers to predict when the floods would come and when it was safe to plant seeds. The Egyptian calendar had 360 days, and three seasons made up of four months, each season corresponding to a phase of the Nile's inundation.

A STABLE SOCIETY

Agriculture had a profound impact on Egyptian civilization, as it has had on every civilization that cultivated crops. Farming provided a more abundant food supply than did hunting and gathering, which enabled the growth of population and the rise of cities. Because farmers were able to grow more than they needed to survive, some people could be freed from working the land to do other tasks—the beginning of professions such as carpentry and metalworking. Perhaps more importantly, the surplus of food allowed some individuals to engage in artistic pursuits such as painting, sculpture, and the crafting of jewelry and other forms of decoration.

In Egypt, many religious beliefs were tied to the annual inundation of the Nile, and priests were needed to intercede with the gods on behalf of the people to pray for the right amount of rain at the right time. A **monarchy** and government **bureaucracy** arose to keep records, manage surpluses, plan irrigation strategies, and allot seed to individual farmers. Writing was invented in order to keep records; early Egyptian **hieroglyphs** dating to over 5,000 years ago record deliveries of linen and oil. Agricultural surpluses could be traded for other commodities, spurring people to travel and explore farther and farther from home. In fact, much of what we associate with the very idea of civilization came about as a result of an agricultural economy.

See also: Egypt; Language and Writing; Nile River; Religion; Society; Technology and Inventions; Tools and Weapons.

FURTHER READING

Van der Veen, Marijke. *The Exploitation of Plant Resources in Ancient Africa*. New York: Springer, 1999.

Wilkinson, John Gardner. *A Second Series of the Manners and Customs of the Ancient Egyptians, Including Their Religion, Agriculture: Volume 2*. Boston: Adamant, 1841, reprint 2001.

Woods, Michael, and Mary B. Woods. *Ancient Agriculture: From Foraging to Farming*. Minneapolis: Runestone Press, 2000.

Akhenaten (also Akhenaton) (r. ca. 1353–1335 B.C.E.)

Egyptian pharaoh who established a **monotheistic** religion. Akhenaten, originally known as Amenhotep IV (R. CA. 1353–1335 B.C.E.), was the son of Amenhotep III and his wife Tiy. Upon his accession to the Egyptian throne, Amenhotep IV began the process of abolishing the **polytheistic** religion of his ancestors and substituting worship of one god—Aten, the sun disc—in its place.

In 1348 B.C.E., the fifth year of his reign, the pharaoh changed his name to Akhenaten, which means "servant of Aten." The following year, he moved his court from the capital of Thebes to a new city, Akhetaten, or the "Horizon of the Aten." The site is now known as Amarna.

In establishing the sun itself as the only and supreme deity, and himself as the only priest, Akhenaten substantially changed the practice of religion in Egypt from a polytheistic one to a monotheistic one. The central statement of the new religion, a poem entitled *Great Hymn to the Aten*, is thought to have been written by Akhenaten himself. In the early years of his reign, Akhenaten allowed what might be called freedom of religion, but he eventually began to forbid the worship of other deities and to channel all revenues from their temples to the worship of the one god, Aten.

During Akhenaten's reign, an entirely new style of art, now known as Amarna art, evolved. Previously, Egyptian art had been rigid and stylized. Now, a more naturalistic art form evolved as a result of the worship of a god who was identified with the sun, the giver of life and light. Among the most famous examples of Amarna art is the bust of Akhenaten's beautiful wife, Nefertiti.

One of the most interesting **artifacts** of the period is a statue of Akhenaten himself that portrays the pharaoh in a most unflattering light. Whereas previous monarchs were depicted as handsome and athletic, Akhenaten is shown as having an exaggeratedly long face, thick lips, almost feminine breasts, a pot belly, broad hips, large thighs, and very thin legs. Scholars have wondered if the portrayal is a result of the king's demand that he be depicted as he really looked, or if there were other motives for the almost surreal appearance of the king. University of Vermont Egyptologist Bob Brier, in his book *The Murder of Tutankhamen* (1999), speculates that Akhenaten might have had Marfan's syndrome, a genetic mutation that leads to nearly all of the odd characteristics portrayed in the sculpture. Interestingly, people with Marfan's syndrome are very sensitive to the cold, which may explain Akhenaten's love of the sun.

Upon his death, Akhenaten was succeeded briefly by Smenkhkare, who may have been Akhenaten's half brother or son, and then by Akhenaten's son-in-law, the eight-year-old Tutankhamen. As pharaoh, Tutankhamen completely repudiated Akhenaten's religion—which quickly fell out of favor with the populace—returned to the capital city of Thebes, and ordered the dismantling of all temples Akhenaten had built to honor Aten. Akhenaten was removed from his tomb and reburied elsewhere; his grave has not been found. Later, under the pharaoh Horemheb (r. 1321–1292 B.C.E.), the names of Akhenaten, Smenkhkare, and Tutankhamen were excised from the list of pharaohs, and it was not until the nineteenth century C.E. that **archeologists** uncovered evidence of the existence of these three men.

See also: Art and Architecture; Egypt; Religion.

FURTHER READING

Aldred, Cyril. *Akhenaten: King of Egypt*. London: Thames and Hudson, 1991.

Hornung, Eric. *Akhenaten and the Religion of Light*. Translated by David Lorton. Ithaca, NY: Cornell University Press, 2001.

Aksum *See* Axum.

Alexander III, the Great *See* Alexandria.

Alexandria

Egyptian port city and ancient capital of Egypt, founded in 332 B.C.E. and named for the Macedonian conqueror Alexander III, the Great (r. 336–323 B.C.E.). Alexandria was one of the greatest cities in the ancient world, second only to Rome.

After conquering Egypt, Alexander founded a new capital city on a stretch of land between the Mediterranean Sea and Lake Mareotis at the site of Rhakotis, a fishing port. The Greek architect Dinocrates designed the new city, after Alexander himself had marked the outline. Alexander left Alexandria, never to return in his lifetime. He was buried there after his death in Babylon in 323 B.C.E.

After Alexander's death, his empire was divided among several rulers. One of Alexander's most trusted generals, Ptolemy I Soter, took control over Egypt upon Alexander's death and ruled as a satrap (a governor subordinate to the king of Persia). In 304 B.C.E., he declared himself king of Egypt, reigning until his death in 283 B.C.E. He founded the Ptolemaic dynasty of Egypt, the last member of which was the famous queen Cleopatra (r. 51–30 B.C.E.).

Ptolemy I envisioned Alexandria as the intellectual and cultural capital of the ancient world. Persuaded by the orator and philosopher Demetrius of Phaleron, he established a museum and the great library of Alexandria, which is reputed to have held between 400,000 and 700,000 parchment scrolls. The actual fate of the library is unknown, but it is thought that Julius Caesar burned it to the ground in 48 or 47 B.C.E.

Although it was built by his son Ptolemy II, the famous Lighthouse, or Pharos, of Alexandria was conceptualized by Ptolemy I. One of the Seven Wonders of the Ancient World, it was constructed about 270 B.C.E. and destroyed by two earthquakes in the fourteenth century C.E. The Pharos of Alexandria was estimated to have stood between 300 to 400 feet (90 to 120 m) high.

Alexandria became a Roman city following the battle of Actium in 31 B.C.E., in which Octavian (later Emperor Augustus Caesar) defeated the forces of Cleopatra and Marc Antony, her Roman lover and Octavian's rival for leader of the Roman state. The couple committed suicide and, with Cleopatra's death, the Ptolemaic dynasty ended. Alexandria remained under Roman control until C.E. 641.

Early in the seventh century C.E., the Eastern Roman Empire had begun to disintegrate. (The Western Roman Empire had fallen to Germanic tribes in C.E. 476.) In 617, Persian forces took Alexandria and held the city for five years, until it was conquered by the Arab general Amr ibn al-A'as in 642. However, the Muslim caliph Omar found Alexandria's location on the western bank of the Nile unsuitable for the capital city. As a result, the Arab conquerors established a new capital, al-Fostat, on the eastern bank. This later became the

RISE AND FALL OF ALEXANDRIA

332 B.C.E. City of Alexandria founded by the Macedonian conqueror, Alexander III, the Great

323 B.C.E. Alexander III, the Great, is buried in Alexandria

304–283 B.C.E. Reign of Ptolemy I Soter, who established Alexandria as his capital

CA. 270 B.C.E. Construction begins on the Lighthouse, or Pharos, of Alexandria, one of the Seven Wonders of the Ancient World

31 B.C.E. Alexandria conquered by Roman forces after the battle of Actium

C.E. 617–622 Persian forces conquer Alexandria and control the city

C.E. 622 Romans reconquer Alexandria

C.E. 642 Arab general Amr ibn al-A'as conquers Alexandria; city declines in importance until the nineteenth century C.E.

CA. C.E. 1400 Lighthouse, or Pharos, at Alexandria destroyed by earthquakes

modern city of Cairo. No longer important to its conquerors, Alexandria declined over the next 1,000 years. The city did not return to its former glory until after the construction of the Suez Canal in the nineteenth century C.E.

See also: Egypt.

FURTHER READING

Empereur, Jean-Yves, and Stephane Compoint. *Alexandria Rediscovered*. New York: George Braziller, 1998.

McKenzie, Judith. *The Architecture of Alexandria and Egypt, c. 300 B.C. to A.D. 700: In Memoriam P.R.S. Moorey*. New Haven, CT: Yale University Press, 2006.

Animism

The belief that objects as well as people and animals possess souls or spirits; in essence, animism is a kind of pantheism, the belief that the creator is everywhere. Many traditional African religions, and especially those from hunter-gatherer societies, hold that people, animals, and natural objects all possess spirits to be treated with respect. In this worldview, people do not consider themselves superior to nature, but rather a part of it.

In animistic religions, people believe that to obtain the necessities of life, such as shelter, food, and clothing, certain **rituals** must be strictly observed. In the Democratic **Republic** of Congo, for example, people throw something red into a river to ensure a safe crossing. Some inhabitants of the forest regions in southern Africa sing songs of praise to the forest to celebrate its bounty and leave baskets of food to thank the forest spirits. The San of the Kalahari Desert pray to celestial spirits and to the moon. In prehistoric times, the San painted elaborate representations of animals on rock walls and cliffs in an attempt, anthropologists believe, to invoke the spirits of the creatures and ensure a successful hunt.

In many agricultural societies, people believe that the earth itself has a spirit to be celebrated and appeased. Among the Ashanti of Ghana, the

earth spirit is called Asase Yaa, Mother Thursday. In her honor, agricultural work is forbidden on Thursdays, and the first fruits and grains of the harvest are offered to her.

Animism also holds that evil spirits cause misfortune. When tragedies occur, people believe that it is important to consult a diviner—someone who claims to be able to discover hidden knowledge through contact with the supernatural—to find out what spirits have caused the catastrophe and determine how to appease them. Thus, in an animistic religion, there are no accidents; for every misfortune, there is a spiritual cause that must be uncovered and dealt with. In many traditional societies, even today, people do not accept the idea of death by natural causes. An outside force is believed to be the cause.

Another aspect of animism is the idea that the spirits of ancestors are always present. Such beliefs are sometimes referred to as ancestor worship, but the term does not accurately describe how traditional African religions regard the spirits of ancestors. According to traditional African beliefs, the dead are still present among the living and must be consulted when making major daily decisions. Traditional African masks often represent the spirits of ancestors, who are evoked in various ceremonies to aid in decision making.

Animistic religious beliefs help people deal with the practical problems of everyday life. Not only do they provide a way for people to understand and cope with tragedy and to celebrate life's bounties, they also help to enforce moral precepts. A belief in living spirits who are watching and involved in everyday lives may keep people from lying, stealing, murdering, and other actions that disrupt the fabric of a traditional society.

See also: Religion.

FURTHER READING

Mbiti, John S. *African Religions and Philosophy*. 2nd ed. Portsmouth, NH: Heinemann, 1992.

———. *Introduction to African Religion*. Portsmouth, NH: Heinemann, 1991.

Archeological Discoveries

The unearthing of fossils, ruins, and **artifacts** reveals what life was like in ancient Africa. While ancient Europe and Asia have been studied extensively, the rich archeological heritage of Africa (outside of Egypt) has yet to be fully explored.

Before Louis Leakey began his **excavations** in Olduvai Gorge in the Great Rift Valley in the 1950s, **archeologists** believed that *Homo sapiens* originated in Asia. However, thanks to Leakey, his wife Mary, his son Richard, and other pioneering scientists, new evidence is uncovered every day that Africa is indeed the "cradle of humanity" and that a great deal of human history took place exclusively there.

THE FOSSIL RECORD

Archeological discoveries in Africa not only have made it clear that humans first evolved there, but they also have forced major changes in how archeologists understand the process of human evolution. One of the earliest finds in this process was the "Taung Child," discovered in 1924 in the town of Taung in South Africa. Professor Raymond Dart of the University of the Witwatersrand in Johannesburg examined the skull of a young boy that was about 2.5 million years old. Dart realized that he was looking at a new species on the human family tree, a humanlike creature with a small brain, which he named *Australopithecus africanus*.

ARCHEOLOGICAL DISCOVERIES

C.E. 1870s European explorers discover the ruins of Giza

1922 Howard Carter discovers the tomb of Tutankhamen

1924 Raymond Dart discovers the "Taung Child"

1936–1939 Finds in Sterkfontein Caves in South Africa prove Taung is a new species

1940s Louis Leakey begins excavation in Olduvai Gorge in Tanzania

1960 Leakey and team discover *Homo habilis*, the oldest human ancestor ever found

1971 Archeologists rush to remove Nubian artifacts before the newly constructed Aswan Dam floods the area

1974 Donald Johanson discovers "Lucy," proving that walking upright preceded brain development

1970s Mary Leakey discovers 3.5-million-year-old footprints at Laetoli in Tanzania

1982 The ancient Roman city of Leptus Minor is declared a UNESCO World Heritage Site

1994 Tim White discovers *Ardipithecus ramidus*, a new bipedal hominid species

2001 Christopher Henshilwood discovers earliest known formal tools in Blombos Cave in South Africa

The most remarkable feature of the Taung Child is the position of the *foramen magnum* (the hole through which the spinal cord connects to the brain), which suggested that he was bipedal—that he walked on two feet. Until this point, scientists had assumed that humans walked upright as a result having larger brains. However, Dart was

GREAT LIVES

The Leakeys

Perhaps no family has had the impact on the study of human evolution as have the Leakeys. Louis Leakey, the patriarch of the family, was born and raised in Kenya. Interested in fossils from his youth, he came to believe that humans had first evolved in Africa. He began excavating in Olduvai Gorge in Tanzania in order to prove his hypothesis correct.

In 1936, Leakey met and married the much younger Mary Douglas Nicol, and she accompanied him in his work at Tanzania. Beginning in the 1950s, the Leakeys, working together, made many important finds, including an early primate fossil they named *Zinjanthropus* (now known as *Australopithecus boisei*).

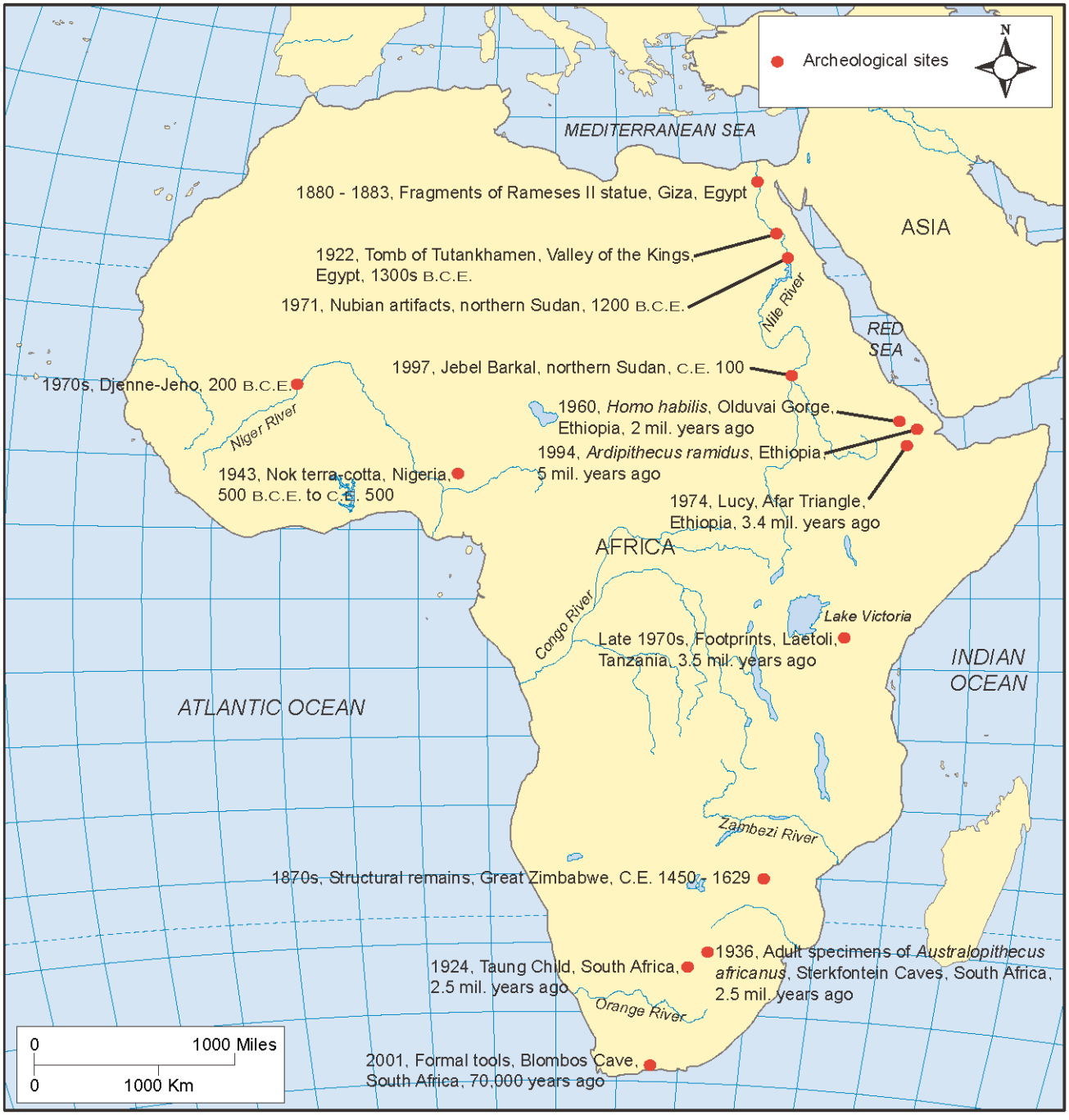
During the 1960s, the Leakeys and their son Jonathan found a skeleton they called *Homo habilis*, or "handy man," the earliest known primate that possessed human characteristics.

Louis became something of a celebrity and traveled the world promoting his ideas. He also attracted several protégés, including Diane Fossey, who studied mountain gorillas, and Jane Goodall, who studied chimpanzee behavior. Meanwhile, Mary continued to search for fossil remains. In 1978, she discovered a trail of human footprints in volcanic ash that was 3.5 million years old. These footprints belonged to the same species as the "Lucy" fossil discovered four years earlier by Donald Johanson.

In 1972, in the year of his father's death, the Leakey's other son, Richard, discovered the skull of a 1.6 million-year-old *Homo erectus*. In 1984 he found a nearly complete *Homo erectus* skeleton. Richard has since retired from fossil hunting, which he leaves to his wife, Meave, and his daughter, Louise, in favor of working in wildlife conservation. Mary Leakey died in 1996 at the age of 83.

MAJOR ARCHEOLOGICAL SITES

As this map shows, Africa, the birthplace of humankind, is rich in evidence of human history. In particular, eastern Africa has been the site of many important finds, especially along the Nile River and in Tanzania. With many areas still unexplored, the promise of future finds is great.



proposing that bipedalism preceded brain development and that it may have been one of the factors that led to increased brain size. The scientific community rejected Dart's theory for more than 20 years, and many archeologists insisted that Taung Child was really a chimpanzee. Finds of adult specimens with similar anatomy at South Africa's Sterkfontein Caves between 1936 and 1939, however, confirmed that Dart was correct in his hypothesis that Taung Child was a new species.

Beginning in the late 1940s, Louis and Mary Leakey began excavating in the Olduvai Gorge in present-day Tanzania. Louis Leakey was convinced that humans had evolved in Africa first, and he set out to find proof. After some false starts, in 1960 he and his team discovered the oldest species of the genus *Homo*. This was the first truly human ancestor discovered by archeologists. The specimens found prior to this time were ancestors of modern hominids (the biological family that includes both humans and great apes such as the gorilla and chimpanzee), but not of the genus *Homo*, which is composed of modern humans and their direct relatives. This creature, dubbed *Homo habilis* ("handy man"), was the link between *Australopithecus africanus* and *Homo erectus*, from whom *Homo sapiens* are descended. *Homo habilis* lived about two million years ago, demonstrating conclusively that the first humans evolved in Africa.

In 1974, American archeologist Donald Johanson found a fossil in an area of Ethiopia called the Afar Triangle that proved to be yet another hominid species. This creature, dubbed *Australopithecus afarensis*, was least a million and a half years older than the Taung Child and had a similarly small brain, yet it appeared to have been able to walk upright. During a celebration of the discovery, the Beatles' song "Lucy in the Sky with Diamonds" was playing, so the specimen was nicknamed Lucy.

In the late 1970s, at Laetoli in Tanzania, Mary Leakey discovered three sets of footprints belonging to two adults and a child. The footprints were attributed to contemporaries of Lucy some 3.5 million years ago. While Johanson believed that Lucy walked upright, this discovery provided documentation and demonstrated that hominoids, humanlike creatures, walked long before they made tools.

In 2001, in the Blombos Cave in South Africa, Norwegian archeologist Christopher Henshilwood discovered evidence of the earliest known formal tools (specialized tools that are symmetrical—made

TURNING POINT

The Discovery of Lucy

In 1974, a young **archeologist**, Donald Johanson, and his colleague, Tom Gray, were exploring near Hadar, Ethiopia, in northeast Africa. Johnson, who said he was feeling "lucky," left Gray and began looking in another area. Suddenly he noticed what appeared to be a hominid arm bone.

Three weeks of intensive work later, Johanson and his party realized that they had uncovered a fairly complete hominid skeleton. In camp that evening while the team celebrated the discovery, the Beatles' song "Lucy in the Sky with Diamonds" was playing in the background. Someone dubbed the skeleton "Lucy," and the name stuck.

Johanson and Tim White worked for five years to classify and date Lucy. In 1978, they determined that Lucy represented a new species, which they called *Australopithecus afarensis*, that had lived in Africa more than three million years ago. Lucy revolutionized thinking about human evolution because she was bipedal, yet had the small brain of a chimpanzee. Until the discovery of Lucy, most scientists believed that humans began to walk upright because their brains had evolved and become more complex. Few thought the process was the other way around. However, Lucy proved that walking upright led to the development of larger brains.

The death mask of the eighteen-year-old King Tutankhamen is perhaps the most recognizable of all ancient Egyptian artifacts. The mask, made of gold inlaid with colored glass, was crafted in about 1350 B.C.E. (Michael Melford/The Image Bank/Getty Images)

the same on both sides, like an arrowhead), dating to 70,000 years ago. Until this discovery, it was believed that such tools arose among humans only after they had left Africa.

EGYPTIAN AND NUBIAN ARCHEOLOGY

The study of the Egyptian past did not begin until the nineteenth century C.E., after the discovery and translation of the Rosetta Stone allowed **linguists** to decode **hieroglyphics**. British archeologist William Flinders Petrie (1853–1942) was among the best of the early Egyptologists; his careful methods helped to define the modern science and practice of archeology. He spent the years 1880 to 1883 excavating the Great Pyramid of Giza, and in 1884 he discovered fragments of a statue of Rameses II.

Another famous Egyptologist, Englishman Howard Carter, discovered King Tutankhamen's tomb in 1922 and spent the next 10 years cataloging its contents. Tomb robbers had stripped many other tombs, but King Tut's tomb was the first that had not been tampered with, making it one of the most important discoveries of the century, teaching historians much about the **material culture** of ancient Egypt.

Today, scientists continue to explore pyramids of both Nubia, the area to the south of Egypt, and Egypt itself using new technologies to extend their reach and enhance their understanding. DNA analysis, for example, has been used to determine the genealogy of Egyptian kings and queens, and computer programs can now be used to rapidly translate hieroglyphs. In October 2005, Egyptian Egyptologist Zahi Hawass announced that a robot would soon be sent into the Great Pyramid of Giza to explore two narrow shafts that may lead to yet undiscovered burial chambers, perhaps including the burial chamber of the pharaoh Khufu himself.

In 1971, construction of the Aswan High Dam along the Nile River in Egypt created an artificial lake. Before the lake was filled with water, archeologists rushed to locate as many as-yet-undiscovered remains of Nubian culture as possible, since much of the territory was soon to be underwater. This sort of rapid, large-scale process to recover artifacts is known as rescue or salvage archeology.

Fortunately, the salvage archeologists were able to learn a great deal about Nubian culture, preserve thousands of artifacts, and even move large monuments. The colossal temple of Rameses II at Abu Simbel was separated into more than 1,000 pieces, each weighing from seven to 30 tons (27 metric tons), and rebuilt on higher ground. Three thousand artifacts unearthed as a result of this project, including sculpture, pottery, carvings, amulets, jewelry,

paintings, and **papyri**, are now housed in the International Museum of Nubia. Despite their great efforts, however, the archeologists left unknown treasures at the bottom of the new lake.

In 1997, Timothy Kendall of Boston's Museum of Fine Arts uncovered a slab of stone in northern Sudan. He and his team continued to dig and uncovered a total of 25 pieces which, when were fitted together, revealed a beautiful picture: a blue sky, filled with stars, and crowned vultures flying into the distance. Kendall believes that these fragments may be part of the vaulted ceiling of a passageway that led into a temple carved into the mountain known as Gebel (or Jebel) Barkal. When looked at from a distance, Gebel Barkal resembles the head of a crowned pharaoh. It was here that both Nubian and Egyptian kings were crowned. The passage was destroyed by an earthquake between C.E. 100 and 200, a catastrophe that may prove beneficial to Kendall and posterity. If the temple has been sealed for more than 1,800 years, its treasures may still be intact.

DISCOVERIES IN SUB-SAHARAN AFRICA

Other major African structures that archeologists have explored include Great Zimbabwe, the remains of massive stone walls and enclosures that were first discovered by Europeans in the 1870s. Because of Europeans' belief that their culture was superior to any black African culture, many believed that Africans could not have built the structures. Unfortunately, much of what would have fascinated modern archeologists was utterly destroyed when a journalist, Richard Nicklin Hall, hired to preserve the site in 1902, stripped away and disposed of 12 feet (3.6 m) of archeological deposits while trying to prove that Arab peoples built the structures. Still, enough remained to allow modern scientists to conclude that Africans indeed built the site.

In 1943, tin miners in Nigeria found a terra-cotta head, which turned out to the oldest figurative sculpture found in sub-Saharan Africa. Since that time, many other figures and fragments have been discovered throughout Nigeria. The sculptures are now known as the Nok terra-cottas, after the small village where they were found. The Nok were a people who flourished in southeastern Nigeria from about 500 B.C.E. to C.E. 500.

STEALING AFRICA'S PAST

It has been estimated that artifacts stolen from Africa account for 10 percent of the $4.5 billion worldwide illicit trade in archeological finds. Among the objects on the black market are stone, terra-cotta, and brass sculptures, wooden grave markers, and masks. Africans themselves are involved in selling their own cultural heritage. Poor farmers in West Africa are easily persuaded to dig up23 and sell precious antique art objects, such as Nok terra-cotta heads. A yam farmer, for example, can earn $30 by selling a single artifact—twice the typical monthly wage.

A number of steps have been taken to curb this trade in cultural treasures. Mali has reduced illegal trade significantly using informants. It has also signed a treaty with the United States restricting the importation of certain artifacts. The thermoluminescence lab at Oxford University in the United Kingdom now refuses to date ceramics and terra-cotta artifacts unless accompanied by documents that confirm legal export. In Niger, archeologists are trying to make sure that villagers understand why it is important not to sell precious artifacts that are essential to an understanding of African history. Meanwhile, more and more precious objects are being taken out of Africa.

See also: Art and Architecture; Egypt; Great Zimbabwe; Libya; Mali; Nok People; Nubia.

FURTHER READING

Connah, Graham. *Forgotten Africa: An Introduction to Its Archaeology*. London: Routledge, 2004.

Hall, Martin. *Archaeology Africa*. Cape Town, South Africa: D. Philip, 1996.

Phillipson, David W. *African Archaeology*. Cambridge: Cambridge University Press, 1985.

Shaw, Thurstan. *The Archaeology of Africa*. London: Routledge, 1995.

Art and Architecture

The painting, engraving, sculpture, and buildings of ancient Africa reflect how early African societies were organized. Ancient African art was seldom created merely for aesthetic enjoyment, or "art for art's sake." While a modern expert might appreciate the fine lines and exaggerated features of a mask crafted by the Igbo of Nigeria, for example, the Igbo themselves would see the mask primarily as an object with spiritual or religious significance.

This is not to suggest that ancient African artists did not appreciate beauty or work hard to ensure that their products were aesthetically pleasing. On the contrary, beauty was an integral part of what made the object sacred. Westerners also admire the many **utilitarian** objects fashioned by African **artisans**. Again, while beautiful, objects such as pottery or carved headrests were primarily intended to serve a particular function, and the beauty of the design was secondary.

EARLY PAINTING AND ENGRAVING

The earliest art found in Africa are small pieces of ochre rock engraved with geometric patterns found in the Blombos Cave in South Africa. **Radiocarbon dating** places these designs at between 70,000 and 100,000 years old, making them the oldest-known images ever discovered. The San of the Kalahari Desert were also prolific painters in **antiquity**; more than 50,000 sites containing rock paintings, or **petroglyphs**, and engravings have been found in southern Africa. As far back as 6000 B.C.E., nomadic peoples also painted on rock in the mountain ranges of the Sahara Desert. Many of these examples of early paintings are difficult to date, other than by noting the animals portrayed. One period, for example, is known as the Bubalus Period (6000 to 4000 B.C.E.) because art produced during that **era** often depicts a now-extinct buffalo of the same name.

Early artists made their paints by grinding pigments, usually red, yellow, black, and white, and mixing them with something that helped the paint adhere to the rocks—perhaps blood, urine, eggs, or plant sap. Paintings of hunting scenes are thought to be of spiritual or magical significance; perhaps the painters sought to capture the spirits of the animals or appease the spirits of those they had killed. Among the most interesting works are the rock paintings in uKhahlamba-Drakensberg Park of present-day Lesotho and South Africa. With 20,000 paintings dispersed over 500 sites, this is the largest group of rock paintings found south of the Sahara. Some of these, called "trance paintings," depict **shamans** as they transform into animals and travel to the world of spirits.

In addition to paintings, early African artists also engraved animals and geometric designs into rock, either in outline form or by scraping away the surface. In the deserts of Niger, **archeologists** have discovered a life-sized engraving of a giraffe that may be 9,000 years old. There are many paintings and engravings of giraffes throughout Africa, because this creature was thought to have magical powers.

ARCHITECTURE THROUGH THE AGES

Most early African architecture south of the Sahara has been lost because the materials used—wood, mud, grasses, animal skins, and reeds—are perishable and decay relatively quickly. Many traditional African groups probably build shelters today in much the same way they did thousands of years ago. Homes tend to be made of mud bricks with thatched roofs and center around a common area. The Dogon people of Mali are famous for their carved wooden doors, and many people decorate

Ancestors of today's Dogon people created these paintings, which were discovered in a cave near Songo Village in what is now the nation of Mali. The paintings depict ceremonial circumcisions. (Eric Meola/The Image Bank/Getty Images)

the exteriors of homes with geometric designs such as circles and zigzags.

The pyramids of Egypt, built perhaps as early as 3000 B.C.E. (scholars still heatedly debate the actual dates of construction), are among the most famous works of ancient architecture in the world. These structures, designed to ease the pharaoh's trip to the afterlife, may have been intended to symbolize the sun's rays, since the ancient Egyptians worshipped the sun god Ra and the sun disk Aten. The pyramids were once covered with highly polished limestone that made the pyramids sparkle in the sunlight, further reinforcing their solar symbolism. Deeply influenced by the Egyptians, Nubian kings also built pyramids for their own burial for 1,000 years after Egyptian burial practices had changed; in fact, there are twice as many Nubian pyramids still standing today than there are Egyptian ones.

The ancient Egyptians also built massive temples to honor their gods. These temples were not places for public worship but sacred sites to be entered only by kings and priests. Temples were enclosed in walls and tended to be rectangular, with the entrance facing the Nile River. The entrance led to an open court that in turn led to a pillared room, then to a sanctuary that housed a statue of the god to whom the temple was dedicated. The capitals of columns in the pillared room, called a hypostyle hall, were carved to resemble lotus and **papyrus**, plants that grew near the Nile. The stone floors were polished to look like water.

The largest ancient stone structure south of the Sahara is Great Zimbabwe, built continuously from C.E. 500 to 1400 by the Shona people. These beautiful stone walls and other structures were constructed of more than a million granite stones so precisely cut that no mortar was needed to hold the structure together. The walls were embellished with bricks set in geometric patterns, rounded gateways, turrets, and towers. Not much is known about the people who lived there since no written records exist.

In the thirteenth century C.E., Ethiopian Christians built magnificent churches hewn out of the volcanic rock of a plateau near the town of Lalibela. The largest, Bet Medhane Alem, is carved out of rock in the shape of a basilica, a rectangle divided into aisles by columns. The Bet Medhane Alem boasts 72 carved columns and is lit by high windows.

Northern Africa is home to many mosques, among the most famous of which is the Djingareyber Mosque in Timbuktu, Mali, built in C.E. 1327. Inspired by Arabic architecture, Djingareyber is nevertheless African in character because of the materials used and the way in which the building fits into its environment. The mosque is constructed of *banco*, earth mixed with straw and other fibrous materials. The thick mud walls keep the interior of the mosque cool even on the hottest days. It has three minarets and 25 rows of pillars. The outside walls are studded with palm tree

LINK IN TIME

Pyramids: Egyptian and Mayan

The ancient Egyptians were not the only people to have built pyramids. The Mayans, a **Mesoamerican** people, also constructed pyramids, thousands of years after the Egyptians. While the Egyptian pyramids were built beginning in about 3000 B.C.E., the Mayan structures were built beginning in about 700 B.C.E.

Mayan pyramids differed from Egyptian in several respects. The most obvious difference is that the Mayan pyramids had steps on all four sides, while most later Egyptian pyramids were smooth sided. Moreover, Mayan pyramids were of two kinds, those that could be climbed and those that were sacred and not to be touched. The sacred pyramids also had steps, but they were too narrow to climb.

A major difference between Egyptian and Mayan pyramids is that many Mayan pyramids had temples constructed at the top, and priests would ascend the stairs to conduct ceremonies. While the Egyptians believed that the pyramids helped pharaohs find their way to the afterlife, the Mayans believed that ascending the pyramids brought them closer to the gods. In the jungle, Mayan temples were often the only objects visible above the forest canopy and so served as landmarks as well. Thus, although Mayan pyramids also served as burial chambers, that was not their sole purpose.

trunks. These are used to climb the walls by masons and others who, to this day, replaster the mosque each year with mud after the spring rains.

SCULPTURE AND PAINTING

Egyptian sculpture and painting were, through most of their history, highly stylized. Egyptian artists treated their subjects in a standardized, idealized manner. Egyptian sculpture portrayed primarily kings, queens, and members of the nobility, and the subjects of the sculptures are found in only three poses: seated, standing, or kneeling. Egyptian sculpture is frontal, meaning that the subjects face straight ahead, never turning the head or body. The subjects of sculpture were usually idealized, the men young and muscular, the women equally young and beautiful. Older men were occasionally portrayed with fat bellies to emphasize their wealth.

Egyptian painting and sculpture were religious, rather than aesthetic. Paintings were used primarily in tombs to depict scenes intended to help the deceased in the afterlife, and sculptures either embodied gods or honored royalty. The stone used in Egyptian sculpture includes limestone, calcite, sandstone, quartzite, granite, and basalt. Like the Greeks, the Egyptians often painted sculptures in bright colors.

The typical style of Egyptian painting includes brightly colored people and objects, with no attempt to place figures in perspective; everything in the painting is on the same plane. Every person and object is drawn in its most characteristic view, with different views often mixed in the same drawing. For example, a person might be shown with the face in profile and the body facing front, with the feet in profile. Often artists would carve a drawing into stone then paint over the carved surface, creating a sculpturelike image called a **relief**. Artists used grids to sketch their figures, so that the proportions of forehead to face or shoulder to knee were always the same.

For about 20 years under the pharaoh Akhenaten (r. ca. 1353–1335 B.C.E), a time known as the Amarna Period after Akhenaten's capital city, Egyptian art became much less stylized and more realistic. For example, paintings portrayed people in much more natural and relaxed poses than did earlier Egyptian art. After Akhenaten's death, Egyptian artists returned to more formal and idealized depiction of their subjects.

Much ancient sub-Saharan art has been lost because it was carved from or painted on wood. Africa

The Kuba people are famous for their ceremonial masks, crafted of wood, raffia, shells, and beads. These masks were worn by dancers in reenactments of the history of the Kuba royal family. (The Bridgeman Art Library/Getty Images)

does not have a major tradition of painting, but there is a long history of sculpture. Among the most remarkable sculptures are those of the Nok people of Nigeria, whose sculptures are the oldest-known figurative works found south of the Sahara, dating back to 500 B.C.E. These sculptures, rendered in terra-cotta, or baked clay, are remarkable works of art whose original purpose is unknown.

Nok sculpture was made in much the same way as a lot of African pottery, by building up coils of clay. Then the figures were constructed with a subtractive technique, by carving away material not meant to be part of the finished product. What has survived are primarily heads that were once parts of larger figures, some of them life-sized. The heads are elongated and sport elaborate hairstyles and

jewelry. Some of the figures appear to depict people who are ill or deformed.

Masks are another great African sculptural tradition. African masks have spiritual significance and form an important part of a number of **rituals**. They may cover simply the face or the entire head; many masks are actually elaborate headdresses. They are made of many materials, but wood is used most often.

Other ancient African sculptural objects include ancestor figures and fetishes, objects believed to have magical powers. Many ancestor figures are realistic in style, in that they actually resemble the deceased; others are more abstract. Fetish figures may be made for protection or to do harm to another. Some fetish figures are made with hollow openings into which magic ingredients can be placed to increase the power of the sculpture.

The beauty and energy of African art have influenced many modern European and American artists. For example, the great twentieth-century artist Picasso was deeply influenced by African mask-making styles.

See also: Akhenaten; Culture and Traditions; Egypt; Great Zimbabwe; Nok People; Nubia; Religion.

FURTHER READING

Allen, James P. *Egyptian Art in the Age of the Pyramids*. New York: Metropolitan Museum of Art, 1999.

Bacquart, Jean-Baptiste. *The Tribal Arts of Africa*. London: Thames and Hudson, 2002.

Elleh, Nnamdi. *African Architecture: Evolution and Transformation*. New York: McGraw Hill, 1996.

Robins, Gay. *The Art of Ancient Egypt*. Cambridge, MA: Harvard University Press, 2000.

Atlas Mountains

Mountainous area in the northwestern corner of Africa, spanning the modern nations of Morocco and Algeria. The mountains, which today are home to millions of Berbers, are divided into five regions: the Middle Atlas, the High Atlas, and the Anti Atlas, all of which are in Morocco, as well as the Saharan Atlas and the Tell, which are in Algeria. They extend for approximately 1,500 miles (2,400 km) and are the northernmost of all of Africa's mountains.

The Atlas Mountains, which are actually part of the same range as the Alps of Europe, were formed in two phases. The western Atlas mountains were formed first, while the eastern part was formed later, at about the same time as the Alps, which arose during the Oligocene and Miocene epochs (from 34 to 23 million years ago and from 23 to 5 million years ago, respectively).

For thousands of years, the peaks and valleys of the Atlas Mountains have been home to Berbers, who live in mud-brick houses and graze their flocks on the mountain sides. Today, Berber families live much as they once did, with no running water or electricity. They endure hot, dry summers and cold, snowy winters. Because of their isolation, living high in the mountains, they were never conquered by Arab invaders and never learned to speak Arabic. Even today, the government of Morocco does not levy taxes on the Berber people, and the Berbers do not receive government services.

The Atlas Mountains form the principal route between the Sahara and the coast of western Africa. Although the mountains are steep, there are many mountain passes through which traveled ancient caravans laden with gold, salt, ivory, and other luxury goods.

The Atlas Mountains are a rich source of agricultural and pastoral land as well as lush forests where

pine, cedar, oak, and cork trees grow; unfortunately, these vast forests are rapidly being cut down for timber. Beneath the ground, there are deposits of lead, zinc, iron, manganese, antimony, and phosphates, as well as gold and silver. In 2000, King Mohammed VI of Morocco announced the discovery of oil fields near the town of Talsint, 500 miles (800 km) southeast of Rabat, Morocco. Many Berbers fear that this discovery will bring an end to their ancient way of life, as the government prepares to drill on the lands where sheep graze and crops grow. If this happens, the Berbers will have no place to go. According to Hassan Ouzat, a professor at Morocco's Agadir University, "There is no longer any hinterland in North Africa where the Native culture can retreat. You can now say for the first time in history, native north African culture—symbolized by its language—is in grave danger of disappearing." If the Berbers do disappear, much history will be lost as well.

See also: Berbers.

FURTHER READING

Brett, Michael, and Elizabeth Fentress. *The Berbers (The Peoples of Africa)*. Oxford: Blackwell, 1997.

Axum (also Aksum)

In modern-day Ethiopia, an ancient kingdom that flourished in the fourth and fifth centuries C.E. This was the first indigenous literate civilization in sub-Saharan Africa.

Of the early history of the Axumite kingdom, little beyond legend is known. The most important of these stories is that of the Queen of Sheba. According to both the Christian Bible and local legend, the queen is supposed to have traveled to Jerusalem to meet King Solomon of Israel. Although the biblical story stops there, the legend maintains that the queen bore Solomon a son who became King Menelik, the founder of the Ethiopian Solomonic Dynasty. Ethiopians believe that Menelik brought the Ark of the Covenant, the chest that held the original stone tablets on which God inscribed the Ten Commandments, home with him from Jerusalem. The Ark, they believe, rests today in the tabernacle of St. Mary's, a sixteenth-century C.E. church built on the site of a fourth-century C.E. edifice in Axum.

It is known that the Axumite kingdom grew out of an amalgamation of Semitic and native African peoples. In the eighth century B.C.E., a group of Sabeans, from the kingdom of Saba in what is now Yemen, migrated to the plateau that later became the Axumite kingdom. John Reader, author of *Africa: A Biography of the Continent* (1998), notes that Axum had the unique advantage of being open to the Red Sea and important trade routes of the ancient world, yet isolated because of its location on a plateau surrounded by rugged cliffs on three sides. Thus, although Arab peoples played a part in its development, Axum transformed this influence into a truly native African culture.

By the first century C.E., Axum's port city of Adulis, located on the Red Sea, had become the gateway for Asians and Europeans to the riches of Africa. Axum exported ivory, rhinoceros horn, hippopotamus hides, gold, spices, and slaves, and imported luxury goods from China, India, and the Black Sea area for its growing upper class. Influenced by the Semitic language of the Sabeans, Axumites developed the only indigenous written sub-Saharan language, known as Ge'ez, which is still used today in the Ethiopian Orthodox church.

The Axumite people were skilled masons and metalworkers. Before their conversion to Christianity under King Ezana in the fourth century (making Ethiopia the first Christian state in the world), the Axumites worshiped the sun and moon. The most remarkable **artifacts** of their early religious beliefs are huge obelisks, called *stelae*, which were

probably used to mark graves and which also served as altars for animal sacrifice. These unique structures were carved to resemble multistoried buildings. The largest one, located in the Ethiopian city of Axum, exemplifies what Russian **archeologist** Y.M. Kobishchanov has called the Axumites' "mania for the gigantic." This structure, intricately carved to represent a 13-story building, weighs more than 700 tons (635 metric tons).

Several factors combined to destroy the Axumite civilization. The Axumites despoiled their environment. As the land was stripped of trees, the rainfall that had once been the source of Axum's agricultural bounty ran off the soil rather than nourishing it. The final blow came in the early eighth century C.E., when Arabs sacked the port city of Adulis, cutting Axum off from the Red Sea. Today Axum is a small town where heavy rains sometimes expose ancient gold and silver coins hidden under the sand.

See also: Agriculture; Art and Architecture; Language and Writing; Religion; Slavery.

FURTHER READING

Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.

Harris, Joseph E. *Africans and Their History*. Rev. ed. New York: Penguin, 1998.

Reader, John. *Africa: A Biography of the Continent*. New York: Knopf, 1998.

B

Bantu Migration

The movement of a group of people originating in modern Nigeria and Cameroon in West Africa throughout the southern portion of the continent beginning about 3000 B.C.E. Bantu is not the name of a particular ethnic group but a term that designates a language family and the people who speak it.

The term "Bantu" was coined by the German **linguist** Wilhelm Bleek and first used in his book *A Comparative Grammar of South African Languages* (1862). Bleek noted a similarity among languages spoken throughout the southern two-thirds of the African continent and theorized that they must all be part of a single language group. He dubbed the group Bantu because of the similarity in the word for "people" in a number of these languages. In Dualo, for example, the word is *bato*; in Herero it is *abandu*; in Kongo it is *bantu*; in Mongo it is *banto*; in Rwanda it is *abantu*; in Shona it is *wanhu*; and in Tio it is *baaru*. Today, as many as 100 million people in 400 different ethnic groups living in the southern part of the African continent speak a Bantu language.

LINGUISTIC EVIDENCE

Because Bantu languages are so widespread, historians, **archeologists**, and linguists have long wondered where the original language, or "mother tongue," originated and how languages related to it came to be spoken over such a wide area. In 1963 University of California linguist Joseph Greenberg advanced the theory that the speakers of the mother tongue originated in Nigeria and Cameroon in West Africa and from there spread southeast.

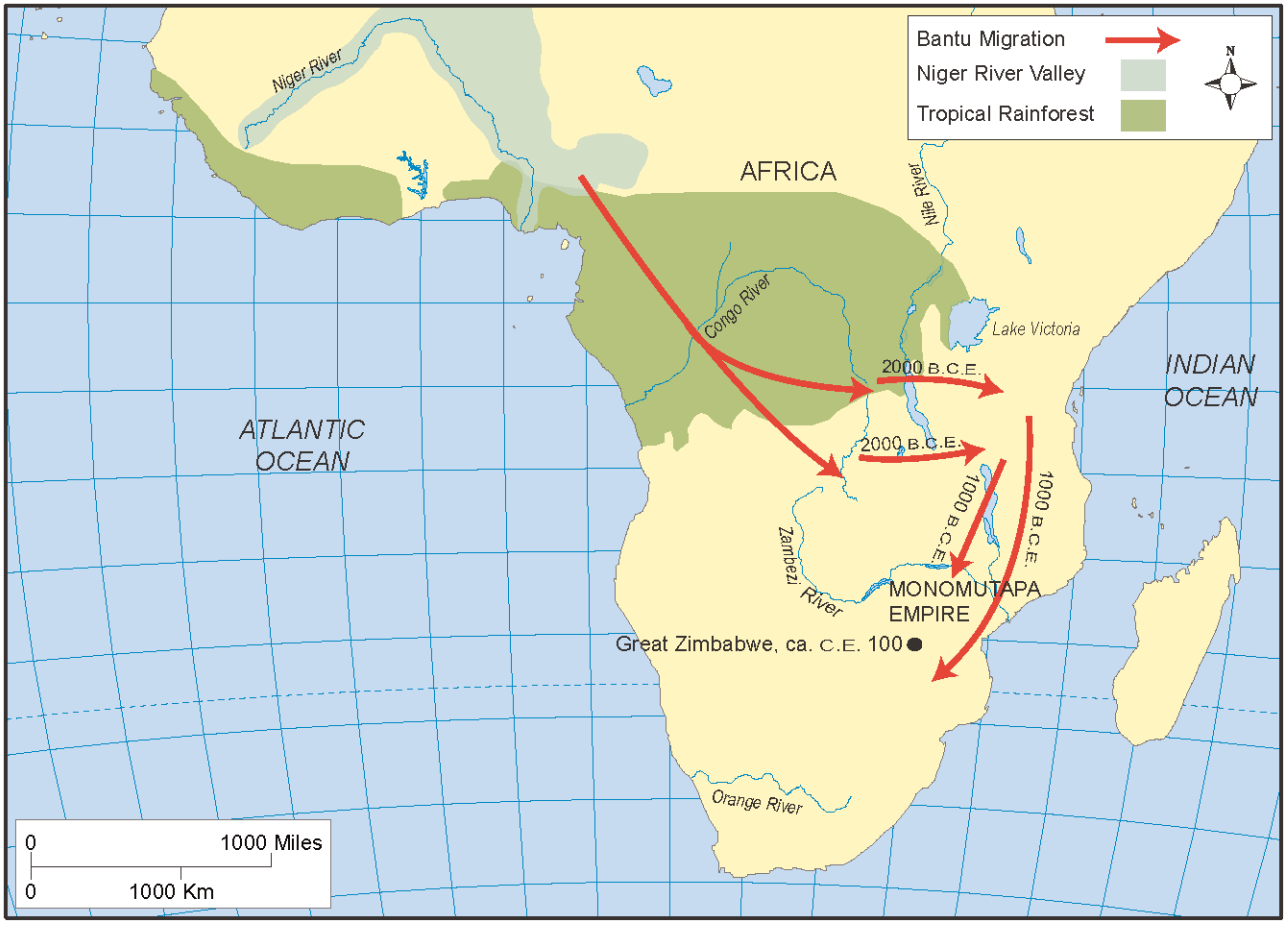
Malcolm Guthrie, a professor of Bantu and author of the four-volume *Comparative Bantu* (1967, 1970, 1971), disagreed with Greenberg. He felt that the language originated in Zambia and the Democratic **Republic** of the Congo in the south central part of the continent. Guthrie believed that the migration of the Bantu began there and spread in all directions from this central location.

Today, most linguists and historians accept a synthesis of these two theories. They believe that the original migration began, as Greenberg had suggested, in Nigeria and Cameroon and spread to Zambia, where the Bantu people stayed for up to 1,000 years. Then, in about 2000 B.C.E., they began to spread into Central Africa, an area that is largely rain forest. In about 1000 B.C.E., the Bantu began to move again into southern and eastern Africa. From there they moved farther east, then south into what is now Zimbabwe and South Africa. By C.E. 1000, the first major empire in sub-Saharan Africa had arisen, with its capital of Great Zimbabwe.

No one knows what prompted any of the series of migrations known collectively as the

BANTU MIGRATIONS, CA. 3000 B.C.E.- C.E. 800

Beginning in the Niger River valley, ancient Bantu-speaking people moved in several waves across the African continent. One group moved east to the headwaters of the Nile River, then south along the Congo and Zambezi rivers to the Orange River. Another moved due south along the west coast of the continent.



Bantu migration. Historians and archeologists surmise that a number of factors led to the various movements, including population expansion, resource depletion, climate change, and the search for more productive land.

OTHER EVIDENCE

The evidence for the Bantu migration is not derived solely from linguistics. Archeologists have also discovered pottery **artifacts** in eastern, southern, and western Africa that share similar characteristics in terms of both construction and decoration. Evidence of iron-working technology in southern Africa can also be used to track the migration. In fact, without evidence available from both linguistics and archeology, the story of the Bantu Migration would never have been known because Bantu languages had no written form until the modern period.

NATURE OF THE MIGRATION

Most historians believe that the Bantu migration was a slow process that did not involve military aggression. Rather, it seems, the Bantu speakers moved into an area and absorbed or merged with the original inhabitants. They had certain advantages over native populations in that they knew how

to work iron and had developed iron tools and weapons, although there is some debate over exactly when they acquired this skill. Some scholars believe that the Bantu learned iron working only around 800 B.C.E. and carried the knowledge with them as they moved south. Others believe that they possessed the technology much earlier.

In any event, because their migration was peaceful, the primary advantage the Bantu gained from their iron tools was in agricultural pursuits. They had domesticated millet and sorghum, and their tools allowed them to harvest the grain much more efficiently than indigenous groups that used stone tools. In addition to planting crops, the Bantu also herded cattle and sheep.

CHARACTERISTICS OF BANTU CULTURES

While Bantu-speaking cultures were and are to this day quite diverse, they shared certain values, social institutions, and styles of art. Bantu-speaking people tend to live in family groups in villages ruled by elders. People feel primary loyalty to members of their extended family, rather than to a far-distant king or other political entity. Among the virtues taught to children is respect for elders and the group as a whole, as well as a strong sense of the interdependence of all people in the community.

Bantu-speaking cultures have a long tradition of sculptural art. The Nok people of what is now Nigeria, remembered today primarily for their terra-cotta statues, were Bantu speakers. The bronze statuary of Benin was also crafted by Bantu speakers. Bantu musicians sing songs that tell stories, either about heroes of long ago or events of daily life. Unlike performers in Europe or America, however, Bantu singers would expect everyone to participate by drumming, clapping, or dancing. Thus, music, like many other aspects of life among Bantu speakers, is highly communal.

There is some evidence that Bantu-speaking people were once **matrilineal**; that is, inheritance was through the female line. While the culture gradually changed to a **patriarchal** one, common in Europe, many aspects of a **matriarchal** culture persisted. Kingship, for example, might pass not from father to son but to the queen's nephew. In the Monomutapa Empire in southern Africa, which was founded by Bantu speakers, the king had nine wives; of these, his sister was the most powerful and in charge of foreign affairs. Some of the wives, in fact, were not even women but men tied to the king by symbolic marriage. That practice harkened back to an earlier period when all the important posts were, in fact, held by women.

See also: Agriculture; Archeological Discoveries; Art and Architecture; Culture and Traditions; Great Zimbabwe; Language and Writing; Monomutapa Empire; Nok People.

FURTHER READING

Africa's Glorious Legacy. Alexandria, VA: Time-Life Books, 1994.

Nurse, Derek. *Bantu Languages*. London: Routledge Curzon, 2003.

Vansina, Jan. *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa*. Madison: University of Wisconsin Press, 1990.

Benin

Founded by the Edo people, a kingdom that flourished from C.E. 1300 until the British destroyed it in C.E. 1897. Ancient Benin is located in what is now Nigeria. Benin was home to the slave turned abolitionist Olaudah Equiano (ca. C.E. 1745–1797) and is now famous for the beauty and sophistication of its bronze bas-**reliefs**, a form of sculpture that involves carving or etching away a surface, leaving a slightly raised image.

LINK IN TIME

The Interesting Life of Olaudah Equiano

Olaudah Equiano was born the son of an Edo chief in the kingdom of Benin in about C.E. 1745. In his autobiography, *The Interesting Narrative of the Life of Olaudah Equiano* (1789), Equiano provides a thorough description of life in the kingdom of Benin in the eighteenth century. When Equiano was about eleven years old, he and his sister were taken as slaves. At first, they were sold to neighboring **tribal** groups and treated fairly well. Eventually, however, Equiano was marched to the west coast of Africa and put aboard a slave ship bound for the Americas. Equiano describes the conditions aboard the ship, making it clear that the experience was a hell on earth:

> The stench of the hold . . . the closeness of the place, and the heat of the climate, added to the number in the ship, being so crowded that each had scarcely room to turn himself, almost suffocated us . . . the air soon became unfit for respiration, from a variety of loathsome smells and brought on a sickness among the slaves, of which many died. This deplorable situation was aggravated by the galling of the chains . . . and the filth of necessary tubs, into which the children often fell, and were almost suffocated. The shrieks of the women, and the groans of the dying, rendered it a scene of horror almost inconceivable.

Equiano was sold to Michael Pascal, an officer in the Royal Navy. Although his lot was hard, traveling with a naval officer gave Equiano many opportunities to learn and develop skills he never would have acquired on a plantation. Pascal even sent Equiano to school in London, where he learned to read and write.

Pascal sold Equiano to a sea captain, who took him to the Caribbean island of Montserrat, where Equiano was able to earn money as a gauger, a person who tests to be sure that weights and measures are accurate. By 1766, Equiano had earned enough money to buy his freedom. Equiano returned to London where he worked as a hairdresser for a time, before going back to the seafaring life for several years.

Equiano is remembered today for his autobiography and his work in the abolitionist movement. His book was a financial success and was instrumental in convincing the British to outlaw the slave trade in 1807. He died in 1797.

Benin was formed into a kingdom when several warring chiefdoms in the forestland of West Africa united in the twelfth or thirteenth century C.E. The people of Benin believe that they became united when Oranyan, a king of Ife in Yorubaland, came to Benin and fathered a child with a daughter of a local chief. That child, Eweka, became Benin's first king, or *oba*. **Archeologists** believe that Benin may have been founded on the ruins of an older civilization because in the country around Benin there are 10,000 miles (16,000 km) of walls, some of which were 30 feet (9 m) tall, that predate the fourteenth-century city.

At first, Benin was governed by the *uzama*, a group of hereditary chiefs headed by the oba. In the fifteenth century C.E., however, Oba Ewuare centralized governing power in the hands of the king by reducing the influence of the uzama. He further strengthened the power of the king by mandating primogeniture, the rule that the king should be succeeded by his son rather than chosen by the uzama. During his reign, Ewuare expanded the territory under the control of Benin, and built a system of walls and moats to protect his capital city. As he had hoped would be the case, Ewuare was succeeded by his son Ozolua, who also expanded Benin's territory, moving west into Yorubaland and east to the Niger River.

Although Ewuare strengthened the power of the king, he did not completely dismantle the older

system of governance. He allowed subordinate chiefs to rule their villages and districts, as long as they paid **tribute**, in the form of palm oil and yams, to the king. Ewuare also expanded the ranks of royalty, by granting titles to deserving young men, including commoners.

In C.E. 1486, Benin had its first contact with Europeans when Portuguese traders arrived on the coast of West Africa. Before long, the kingdom grew rich from trade in pepper, ivory, and cloth. Unlike the Yoruba kingdom of Ife just to the west, Benin did not at first allow its own people to be sold as slaves, though it did import slaves from other parts of Africa to sell to Portuguese merchants. Benin grew in wealth as the result of commerce with Europeans, and, as a result, kings and chiefs were able to support a growing group of artists and craftspeople. Expanding trade networks resulted in an influx of copper and brass, leading the metalworkers of Benin to refine their techniques for casting bronze and brass. Beautiful brass bas-reliefs lined the walls of the oba's palace. So rich with detail are the Benin bronzes that they provide an unusually vivid insight into court life in fifteenth- and sixteenth-century Benin. **Artisans** also made plaques of ivory, wood, and bronze, and life-size bronze heads of the kings and queens of Benin.

The kingdom of Benin grew in wealth through the sixteenth and seventeenth centuries C.E. but declined in the eighteenth century when power struggles within the court weakened the power of the oba. During the eighteenth century, Benin violated its own rule and began to sell its own people as slaves, and soon, slaves, rather than cloth, became the kingdom's major export. In about 1756, in fact, abolitionist and author Olaudah Equiano was kidnapped from his village in the kingdom of Benin and sold into slavery.

See also: Culture and Traditions; Myths and Epics; Slavery; Society; Yoruba.

FURTHER READING

Equiano, Olaudah. *The Interesting Narrative of the Life of Olaudah Equiano: Written by Himself*. Edited by Robert J. Allison. New York: Bedford/St. Martin's Press, 2006.

Millar, Heather. *The Kingdom of Benin in West Africa*. New York: Benchmark Books, 1996.

Berbers

Native, non-Arab **caucasoid** people of North Africa. The origin of the Berber people is unknown; some **archeologists** and **linguists**, however, believe that they may have migrated to northern Africa from southwest Asia in the third millennium B.C.E.

The name "Berber" comes from the Arabic, meaning one who does not speak Arabic; the Berbers' name for themselves is *imazighan* (singular *amizgh*), meaning "free people."

The history of the Berbers is often unclear since they never were a unified people and never possessed a stable political identity. Even today, many Berbers do not identify with a particular nation but with their own tribes or clans. In general, their history is one of conquests—by Egyptians, Greeks, Phoenicians, and Arabs. Complicating the study of this people is the fact that they speak many and varied dialects of a language called Tamazight, which does not have a written form. Over the centuries, Berbers have adopted the written languages and cultures of their conquerors, while continuing to speak their own language among themselves.

The homes in this Berber village in Morocco are made of mud and straw, a combination that, when it hardens, becomes a sturdy building material. In the hot desert climate of the region, the mud homes stay relatively cool. (Tariq Dajani/The Image Bank/Getty Images)

The Berbers comprise three major tribes, the Sanhaja, the Masmoda, and the Zenata. The Sanhaja are desert nomads who roamed the Sahara; the Masmoda are farmers who lived in the north, the west, and in the mountainous regions of North Africa in what is now Algeria and Morocco. The Zenata are horse-riding nomads who lived on the interior plateau of the region of the Sahara.

The Arab conquerors of northern Africa had the most lasting impact on the Berbers. Most Berbers converted to Islam in the early years of the eighth century C.E. When Islam split into two branches (Sunni and Shi'a), also in the eighth century C.E., Berbers adhered to the minority Shiite version and rejected the Sunni beliefs of their Arabic conquerors.

In the seventh century C.E., a Moorish army conquered much of Spain, which they called al-Andalus. *Moor* is a term that designated persons of mixed Arabic and Berber descent. The Spanish Moors evolved a unique culture, achieving a golden age during the caliphate of Córdoba from C.E. 929 to 1013. Religious tolerance and a flowering of learning including scientific inquiry, philosophy, and the arts marked the period. Civil wars beginning in 1009 destroyed the caliphate, and al-Andalus devolved into a number of independent city-states called *taifas*.

Members of the Berber Sanhaja tribe founded a Moroccan dynasty, called the Almoravides, in the eleventh century C.E. Under the leadership of Ibn Tashfin (d. 1106), who took the title *amir al-muslimin*, or "commander of the Muslims," the Almoravides conquered Morocco and the kingdom of Tlemcen in what is now Algeria. When the taifa kings in Spain asked the Almoravides for

help against the Castilian King Alfonso VI, the Almoravides not only conquered Alfonso, they took over the taifa kingdoms as well.

The Almoravides were succeeded in Morocco and in Spain by another dynasty, the Almohads, who were Berbers of the Masmoda tribe from the mountainous regions of North Africa. Both of these Berber groups were much less tolerant of Christians and Jews than the earlier rulers of al-Andulus had been. A third Moroccan dynasty, the Marīnids, was founded by nomadic Zenata Berbers in the late thirteenth century. The Castilian King Alfonso XI defeated this dynasty in 1340, effectively ending Moorish control of Spain.

Today Berbers form the majority of the populations of Morocco, Algeria, Mauritania, and Tunisia. Isolated Berber groups also can be found throughout North Africa.

See also: Carthage; Greek Colonies; Language and Writing; Religion.

FURTHER READING

Brett, Michael, and Elizabeth Fentress. *The Berber (The People of Africa)*. Oxford: Blackwell, 1997.

Goodman, Jane E. *Berber Culture on the World Stage: From Village to Video*. Bloomington: Indiana University Press, 2005.

Caravans *See* Salt Trade.

Carthage

Ancient Phoenician city-state located in North Africa, in what is now Tunisia. The Phoenicians, a Semitic people who lived at the eastern end of the Mediterranean Sea, founded Carthage in the eighth century B.C.E.

The Phoenicians were great sailors and traders, and they are credited with inventing the first alphabet. Since they sailed the entire Mediterranean as far as the Iberian Peninsula (modern-day Spain and Portugal), they needed settlements where they could stop to reprovision their ships. These settlements served as markets for their cargoes as well. Carthage became the greatest of these outposts. When in 575 B.C.E. the Babylonian King Nebuchadnezzar captured the Phoenician capital of Tyre, Carthage became the chief city of the Phoenician empire, a series of coastal cities along the Mediterranean.

During the height of its power, Carthage fought many battles over its trading routes and outposts. Most important were the Sicilian Wars and the Punic Wars. From 480 to 307 B.C.E., Carthage was involved in three wars with Greek forces on the island of Sicily. Plagued by catastrophes, such as losses at sea that decimated their forces before they could even land in Sicily, the Carthaginians were unsuccessful in their attempts to drive the Greeks from their stronghold of Syracuse. By the end of the third war, the Carthaginians were confined to the southwest of the island.

More important were the Punic Wars, whose name derives from the Roman word for "Phoenician." These conflicts between Rome and Carthage began when the Mamertines, mercenary soldiers who had settled on Sicily, asked both Carthage and Rome for protection from Hiero II, the tyrant of Syracuse. While Rome hesitated, Carthage sent a garrison to Sicily. However, instead of protecting the Mamertines, the Carthaginians began negotiating with Hiero.

This worried the Romans, because Sicily lies strategically across the main east-west trade route in the Mediterranean. To secure control over Sicily, the Romans attacked the Carthaginians, thus launching the First Punic War (264–241 B.C.E.). Carthage ultimately was defeated and forced to pay heavy **tribute** to Rome.

In 218 B.C.E., the Carthaginian general Hannibal, who was stationed in Iberia, launched the Second Punic War with a bold invasion of Roman territory.

RISE OF CARTHAGENIAN RULE

814 B.C.E. Dido, a figure in Roman mythology who appears prominently in Virgil's *Aeneid*, is said to have founded Carthage after her brother murdered her husband

575 B.C.E. King Nebuchadnezzar captures Tyre; Carthage becomes the major city of the Phoenician empire

479–450 B.C.E. Carthage conquers most of Tunisia

470–307 B.C.E. Phoenicians battle in three separate wars with Greeks on the island of Sicily

264–241 B.C.E. Carthaginians and Romans fight the First Punic War; Carthage defeated and forced to pay tribute

218 B.C.E. Carthaginian general Hannibal crosses the Alps to attack Rome by land, beginning the Second Punic War

216 B.C.E. Hannibal defeats Rome in the Battle of Cannae

203 B.C.E. Hannibal defeated by Roman General Scipio at Zama

183 B.C.E. Hannibal commits suicide to escape the Romans

149 B.C.E. Cato persuades the Roman senate to attack the city of Carthage, initiating the Third Punic War

146 B.C.E. Romans attack and raze the city of Carthage

C.E. 200 Carthage, rebuilt, is the chief city of Roman Africa

Hannibal assembled an army estimated at 50,000 to 60,000 men accompanied by several dozen war elephants, crossing both the Pyrenees and Alps mountains to attack Rome by land. The Romans were completely unprepared, believing that a large military force could not successfully cross the mountains. Although Hannibal won most of the battles he fought against Rome, lack of supplies eventually forced him to return to North Africa. In 203 B.C.E., the Roman general Scipio defeated Hannibal on the plains of Zama near Carthage.

After two long and bitter wars and Hannibal's invasion, the Romans continued to hate Carthage. In 149 B.C.E., the Roman senator Marcus Cato persuaded the Senate to attack the city of Carthage itself, beginning the Third Punic War. Three years later, the Romans captured and razed the city, selling all its surviving occupants into slavery.

Despite the Romans' attempts to obliterate all traces of their hated rival, they eventually built a new city on the ruins of the old. In an ironic twist of history, by the second century C.E., Carthage was the chief city of the Roman province of Africa. It was destroyed by Muslim conquerors in the seventh century C.E.

See also: Language and Writing.

FURTHER READING

Bagnall, Nigel. *The Punic Wars: Rome, Carthage, and the Struggle for the Mediterranean*. New York: Thomas Dunne Books, 2005.

Church, Alfred J. *The Story of Carthage*. Rev. ed. New York: Biblio and Tannen, 1998.

Christianity *See* Kongo Empire; Religion.

Cleopatra *See* Egypt.

Culture and Traditions

Tracking the systems of values, behaviors, and customs that define the peoples of ancient Africa reveals what distinguishes each group and what kept them unified. Africa is the home to many different cultures and traditions, many of which were partially or completely destroyed by European colonists and missionaries during the eighteenth and nineteenth centuries.

More is known about ancient Egypt than about other African cultures because the Egyptians compiled detailed written histories. Few other African cultures developed written languages with which to preserve a record of their activities. Still, much about ancient cultures can be learned from oral history, and there are groups in Africa today that anthropologists believe live in much the same way as their forebears did. The cultural practices of these groups provide an insight into **patterns of continuity and change** in Africa.

FAMILY STRUCTURE AND SOCIETY

One of the most important aspects of culture is how families are conceptualized and structured. Variations in family organization throughout ancient Africa reflected local differences in cultural and social traditions.

The Egyptian Family

The family structure that arose in ancient Egypt was very much like that of the modern nuclear family—mother, father, and children living together in one home. Lineage, or the line of ancestors and descendents, was traced through both parents' families, much as they are in the West today. Although family ties were very important, Egyptians did not have kinship terms beyond "mother," "father," "daughter," and "son." The same word was used for "mother" and "grandmother," for example.

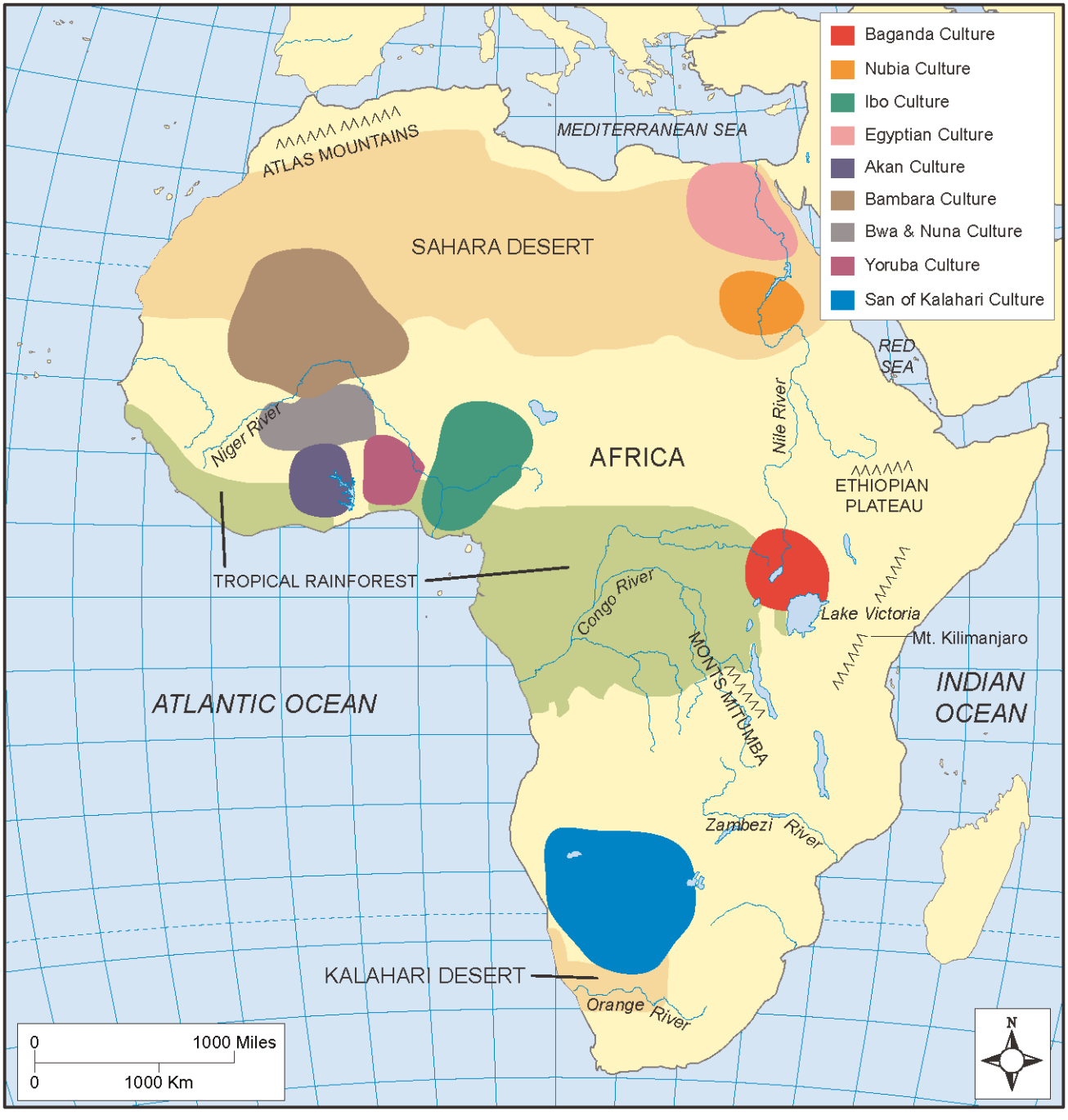
Women married young, usually as soon as they were sexually mature; their husbands were a few years older. Virginity in women was not considered a prerequisite to marriage, and marriage was not a religious ceremony. In fact, there was usually no ceremony involved at all; people simply moved in together. Divorce was equally easy and seemed to carry no social stigma, though it was not common.

Women were subordinate to men and expected to obey the wishes of their fathers and husbands. Still, Egyptian women had more rights than those from other ancient cultures and, in fact, more than many women worldwide until the nineteenth century. They could own and inherit property, make business deals, and represent themselves in court.

Except for the children of nobility, most children were educated at home. Girls learned how to cook and keep house, plant and harvest gardens, and care for children. Boys were apprenticed in a skill or trade, such as farming or metalworking, often to their fathers. Children were expected to respect their parents and to ensure that they received a proper burial at death.

INFLUENCE OF GEOGRAPHY ON THE RISE OF CIVILIZATION

Many major cultural areas of Africa correspond to noteworthy geographical features. Northern Africa, along the Mediterranean coast, is home to traditions that are very different from those found in the tropical rain forests of the Congo basin. The Sahara, too, has spawned a distinct way of life, as have the grasslands of the western Sudan.



Families Outside Egypt

Outside of Egypt, many different family structures existed and still exist in Africa. The Ibo of Nigeria, for example, have a **patrilineal** system of kinship as they probably did in ancient times. The Ibo live in villages in which all or nearly all the people are related through their fathers. Their society is also patrilocal, which means that when a woman marries, she leaves her parents' village and moves into her husband's.

The importance of extended family is reflected in Ibo kinship terms. The same term, *nna*, for example, is used to refer to a person's father and uncles; *nne* refers to both mothers and aunts. The terms for brother and sister (*nwa nne/nwa nna,* respectively) refer to cousins as well as siblings. Thus, an individual has many mothers and fathers and many siblings, emphasizing the importance of community and relationship.

The Ibo are **polygamous**, in that men may have more than one wife, a practice that was common throughout Africa before Christian missionaries arrived in the fifteenth century C.E. and condemned what they considered sinful behavior. To this day, among the Ibo, a man who has several wives and many children is particularly respected in his community.

The Akan of Ghana are a **matrilineal** society, in which inheritance is traced through the mother's line. Again, anthropologists make the assumption that these modern-day traditional societies are similar to ancient cultures in the region, about whom little is known because of the lack of a written language. The Akan are divided into clans, each of which claims to be descended from a single female ancestor. Land is considered the property of the ancestors of each clan and cannot be distributed outside the clan through inheritance or sale. Thus, inheritance usually goes not from father to son, as in a patrilineal society, but from mothers' brothers to sisters' sons.

Unlike the Ibo, most Akan continue to live with their birth families, even after marriage. Thus, everyone living in a single compound is related through their mothers. Husbands live nearby and may visit nightly; wives cook for their husbands, but they do not live with them.

Among the Baganda of Uganda, lineage is determined after birth. Mothers bring their children's umbilical cords to the clan chief and place them in a can filled with beer, milk, and water. If the cord floats, the children are accepted as legitimate; if not, they are disowned. Once a child is weaned, he or she no longer lives with biological parents. Boys live with their uncles, and girls live in the homes of married older brothers or uncles.

CULTURAL MORES AND TABOOS

Because of the importance of family and kin in Africa, customs and taboos are frequently determined by family and relationships. These cultural practices define and reinforce the cultural mores, or generally accepted values, of the group.

Customs and Mores

One widespread traditional African practice is the bride price, in which a man gives substantial gifts to a woman's family to seal the marriage. Among the Ibo, for example, the payment to the parents of the bride ensures the legitimacy of the children, including children born out of wedlock and those fathered by the husband with another woman. The bride price also helps to ensure that marriages stay together, because both families have a financial as well as personal interest in keeping their children together.

In many **primitive,** or traditional, African cultures, children are regarded as the reincarnation of ancestors, and children's names are chosen carefully to highlight this relationship. Among the Baganda, for example, the entire group, including the child to be named, gathers to hear the chief speak the names of ancestors, one after the other. When the child laughs, the name that has just been spoken is given to him or her, and the people believe that the spirit of that ancestor has been reborn in the child.

By contrast, the Yoruba do not believe that a child exists spiritually until he or she is named. While the mother gives the child physical life, the father provides the name, which often has a particular

The Dogon of Mali make large, elaborate, wooden masks that are worn at funerals to help usher the spirit of the dead person out of this world and into the world of the ancestors. (Eric Meola/Iconica/Getty Images)

meaning that is thought to influence the child's personality and future. For example, the name Ore means "goodness." In fact, most African names have a meaning and are chosen carefully and bestowed in elaborate ceremonies. While the names of American children have meanings (Elizabeth, for example, means "Gift of God"), most American parents do not believe that the name confers a magical power; many African families do.

Children in many traditional African cultures undergo initiation rites upon reaching puberty. For boys, these rites may involve circumcision; female circumcision is practiced less often. Ancient Egyptian documents suggest that circumcision was a rite of passage to adulthood in Egyptian society, though it is not known how widespread it was.

Ancient initiation rites are still practiced in traditional African societies. Even today, initiation rites often entail the removal of all children from a particular age group to a secret location. The children may undergo various tests to prove their strength, and in some cases injuries are inflicted to symbolize the change the child is expected to undergo. Some initiation rites even simulate death and rebirth.

Perhaps the most important element of the initiation rite is the instruction in religion, sexuality, and appropriate behavior that the children undergo. This aspect of the **ritual** is intended to ensure that, when the initiates return to the village as adults, they are able to be successful members of the community.

Because of the widespread belief that the spirit lives on after death, many important customs revolve around death and burial. Traditional African cultures such as the Ibo of Nigeria have many customs that are designed to ease the spirit into the afterlife or to make sure that the spirits of the dead are not angry. Some groups bury the dead in their own homes or within the family compound; others quickly move the body out of the communal area to a burial ground some distance away. As in Egypt, many traditional African groups buried the dead with objects they might need in the afterlife. In predynastic Egypt and other parts of Africa, including Nubia, kings were often buried with servants whose lives were sacrificed so they could continue to serve in the afterlife.

Taboos

Although the pharaohs regularly married their siblings, incest (sexual relations between close relatives) in ancient Egypt seems to have been confined to nobility. In traditional African cultures outside of Egypt, the incest taboo was among the most powerful. Because most residents of an Ibo village

LINK TO PLACE

Masks in Africa and the Americas

Humans have made masks since prehistoric times, and the wearing of masks has spiritual significance in many cultures. Sometimes masks are worn to represent the spirit of an ancestor or animal, to frighten away spirits, or to instill fear in others. Sometimes masks are worn to tell stories and to celebrate the values of a culture.

In Africa and the Americas, masks are an important part of funerary rites and **rituals** intended to appease the spirits of ancestors or to ask for their intercession with the gods. These masks may be highly individual, actually resembling a particular ancestor, or they may be more stylized. Among the Egyptians, the Aztecs, and the Incas, masks were also used to cover the faces of the dead to protect them from evil spirits.

Masks are also used to call forth or embody the spirits of animals, particularly those totems sacred to a particular tribe or group. The tribes of the northwest coast of America were particularly artful in their representation of such animals as the Raven, the Whale, the Bear, and the Thunderbird. Masks of these creatures were worn to tell the myths and stories important to the tribe and to invoke the spirits of the animals.

In Africa, the Bambara people of Mali wear antelope masks during fertility rites, because the antelope is associated with the growth of crops. The Bwa and Nuna of Burkina Faso craft masks to represent powerful animals such as the buffalo, the hawk, and the crocodile, and perform dances in the hope that the spirits of these animals will protect them.

Masks also have comic and festive uses, much like the masks worn at Mardi Gras celebrations and on Halloween. The Ibo of Nigeria have a number of comic masks, as do the Eskimo of North America. People wearing masks with exaggerated features act in a clownish fashion to make people laugh.

are related, for example, two individuals from the same village are forbidden to marry, even if they are known to be unrelated.

The Akan may not marry within their clan, but as most marriages are arranged in order to preserve systems of alliances within the larger social organization, leaders often encourage **cross-cousin marriages**. In a cross-cousin marriage, a man marries his mother's brother's daughter, a woman her father's sister's son. In rural areas of modern Egypt, in fact, the marriage of cousins from the father's side is still common. Among the San of the Kalahari, the incest taboo extends to anyone who has the same name, even if it is clear that individuals are not related.

Taboos against killing or eating certain animals are common. Many clans have totem animals that are sacred to the clan, and these may not be eaten. Among the Ashanti, for example, it is taboo to kill a leopard.

Other taboos in traditional African society are quite similar to the prohibitions of the Ten Commandments. Adultery is forbidden, as are murder, lying, stealing, and failing to respect elders and ancestors. In traditional societies, crime and sin are the same, since religion permeates all aspects of life.

See also: Animism; Egypt; Religion; Society.

FURTHER READING

De Villiers, Marz, and Sheila Hirtle. *Into Africa: A Journey through the Ancient Empires*. Toronto: Key Porter Books, 1999.

McCarthy, Cara, et al. *Masks: Faces of Culture*. New York: Abrams, 1999.

Richardson, Hazel. *Life in Ancient Africa*. New York: Crabtree, 2005.

Wilson, John. *The Culture of Ancient Egypt*. Chicago: University of Chicago Press, 1956.

Egypt

One of the world's earliest civilized societies, an African culture that developed along the Nile River and endured for thousands of years. The Nile River was a magnet that drew people to its banks. Thanks to the annual flooding of the river and the rich soil that remained after the floods, agricultural settlements were founded there as early as 8,000 years ago. By the late fourth millennium B.C.E., these settlements grew into two of the most the complex cultures of Upper and Lower Egypt.

PERIODIZATION OF EGYPTIAN HISTORY

By 3100 B.C.E., Upper and Lower Egypt were united, legend has it, by the warrior king Menes (r. ca. 3100–3066 B.C.E.). Some historians believe that Menes may have been the same person as the pharaoh Narmer, who founded Egypt's First Dynasty. The period of ancient Egyptian history from the First to the Fourth Dynasties (ca. 3100–2755 B.C.E.) is referred to as the Early Dynastic Period. During this time, the capital city of Memphis was built, and Egyptians developed a calendar and **hieroglyphic** writing.

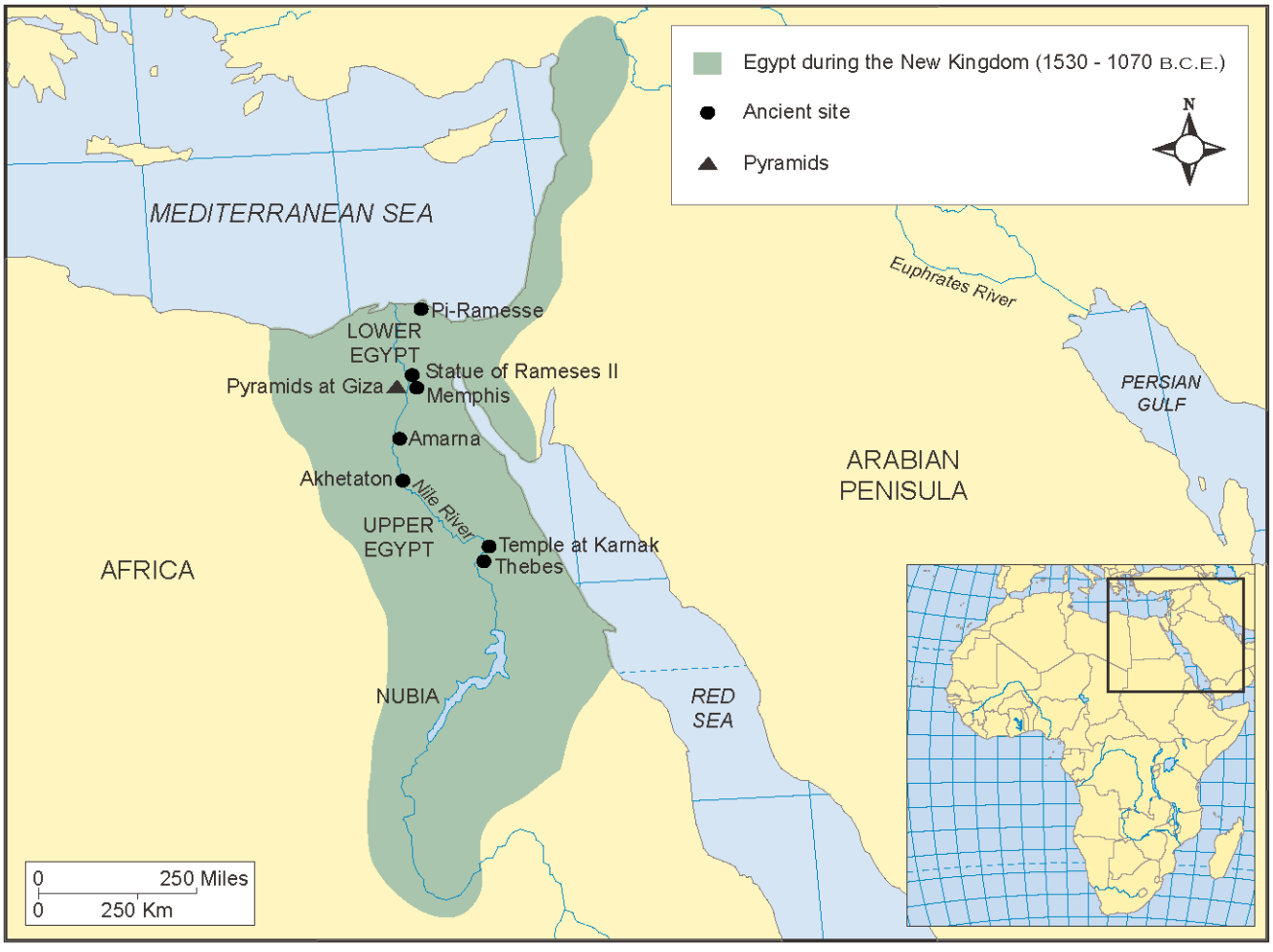
Historians divide the history of Egypt after the Early Dynastic Period into three broad **eras** of unity and stability, known as Kingdoms. These are separated by times of unrest and instability referred to as Intermediate Periods. Dividing history into eras in this fashion is known as **periodization.** The Old Kingdom (ca. 2680–2255 B.C.E.) and Middle Kingdom (ca. 2134–1786 B.C.E.) were separated by the First Intermediate Period. A Second Intermediate Period preceded the New Kingdom (ca. 1570–1070 B.C.E), which was followed by the Third Intermediate Period. The last two eras of ancient Egyptian history—the Late Period (715–322 B.C.E.) and the Greco-Roman Period (332 B.C.E. to C.E. 395)—were largely times of foreign rule.

OLD KINGDOM

The Old Kingdom was a time of great prosperity and innovation in Egypt. These years saw the construction of most of the Egyptian pyramids, including the largest, the Great Pyramid of Giza, built in about 2560 B.C.E. for the pharaoh Khufu. During this period, the Egyptians made great strides in sculpture, astronomy, navigation, and medicine. They also engaged in extensive trade throughout the Middle East. By the mid-twenty-third century B.C.E., however, a combination of factors, including economic stresses and drought that led to famine, brought an end to the Old Kingdom.

EGYPT, CA. 1530–1070 B.C.E.

This map illustrates the Egyptian Empire at its height, during the New Kingdom. The advanced cultures of Egypt grew along the rich soil near Lower Egypt and more southerly river areas such as Upper Egypt.



MIDDLE KINGDOM

For about 100 years, Egypt was ruled as a number of independent states until the pharaoh Mentuhotep (r. 2131–2074 B.C.E.) again united Upper and Lower Egypt and founded the Eleventh Dynasty. Mentuhotep and his successors expanded Egypt's territory into Nubia, as far south as the second cataract of the Nile River. The greatest of the pharaohs of the Middle Kingdom was Amenemhat III (r. 1976–1947 B.C.E), who ruled for 45 years. During this period, Egypt saw an increase in trade and a new level of creativity in the arts.

The Middle Kingdom came to an end when nomadic groups from Asia arrived during the Second Intermediate Period. Egyptians referred to the kings of these people as *hikau khausut*, or "rulers of foreign countries," a term the Greeks corrupted to Hyksos. The Hyksos, who succeeded in gaining control, ruled Egypt for about 100 years and introduced the horse-drawn chariot.

NEW KINGDOM

An Egyptian general, Ahmose, defeated the Hyksos around 1570 B.C.E. and established the Eighteenth

KINGDOMS OF ANCIENT EGYPT

3100 B.C.E. Upper and Lower Egypt united by the warrior king Menes

3100–2755 B.C.E. Early Dynastic Period of Egyptian history; divine kingship becomes established

CA. 2680–2255 B.C.E. Old Kingdom; richest and most creative period in Egyptian history; time of pyramid building

CA. 2255–2035 B.C.E. First Intermediate Period; a time of droughts and political unrest

CA. 2134–1786 B.C.E. Middle Kingdom; Egypt reunited under Mentuhotep

1786–1570 B.C.E. Second Intermediate Period; a Semitic people known as the Hyksos take control of the Nile Delta

1570 B.C.E. The Egyptian general Ahmose defeats the Hyksos and establishes the Eighteenth Dynasty

CA. 1570–1070 B.C.E. New Kingdom, a period of renewed prosperity

CA. 1350–1334 B.C.E. The rule of Akhenaten, who forbade the worship of any god but Aten

1070–715 B.C.E. Third Intermediate Period, a time of chaos

715–322 B.C.E. Late Period; Egypt suffers repeated attacks from Assyrians

525 B.C.E. Egypt conquered by Persia

332 B.C.E. Alexander III, the Great, conquers Egypt and founds the city of Alexandria

332 B.C.E.–C.E. 395 Greco-Roman Period; Egypt ruled by Greece until 30 B.C.E., when it is conquered by Rome

30 B.C.E. Death of Cleopatra, the last of the Ptolemaic rulers of Egypt

Dynasty, ushering in the New Kingdom. In addition to defeating the Hyksos, Ahmose also reconquered Nubia and parts of Syria. Among the notable pharaohs of this era was Amenhotep IV (r. ca. 1350–1334 B.C.E.), who changed his name to Akhenaten in honor of the god Aten, the sun disc, and forbade the worship of any other god. After his death, the pharaoh Tutankhamen reinstated worship of the old gods.

Following the death of Pharaoh Rameses XI (r. 1102–1073 B.C.E.), Egypt was again divided into two kingdoms. During this period, Nubian kings of the Twenty-fifth Dynasty ruled Egypt.

LATE PERIOD

Persia conquered Egypt in 525 B.C.E., and the once-great Egyptian nation became a province of the Persian Empire. During a brief period known as the Thirtieth Dynasty (380–343 B.C.E.), Egyptians overthrew Persian rule. However, the Persians reconquered the land in 343 B.C.E. and were particularly harsh on the native peoples. As a result, when the Macedonian king Alexander III, the Great (r. 336–323 B.C.E), conquered Egypt in 332 B.C.E., the people welcomed him as a liberator.

GRECO-ROMAN PERIOD

Alexander died shortly after he conquered Egypt and founded what was to become the great city of Alexandria. One of his generals, Ptolemy I Soter, stayed in Egypt as governor and eventually declared himself king (r. 323–283 B.C.E.). The Ptolemaic dynasty ruled Egypt for more than 250 years; the last ruler of that dynasty was Cleopatra VII (r. 51–30 B.C.E.).

After Cleopatra's death in 30 B.C.E., Egypt came under Roman rule. By the late fifth century C.E., Rome had been overrun by invading Germanic

The Great Pyramid of Khufu, the only one of the Seven Wonders of the Ancient World to survive to the present day, is on the right side of the image. The other two pyramids were built for pharaohs Menkaure and Khafre. (Kenneth Garrett/National Geographic/Getty Images)

GREAT LIVES

Cleopatra (69–30 B.C.E.)

Cleopatra VII (r. 51–30 B.C.E.) came to the throne of Egypt as a 17-year-old girl. Although she was not allowed to reign alone (her 12-year-old brother Ptolemy XIII served as her consort), Cleopatra ruled Egypt virtually unchecked. Eventually, Ptolemy's advisors convinced him to exile Cleopatra to Syria in 48 B.C.E.

Later that year, the Roman general Julius Caesar captured Alexandria and restored Cleopatra to her throne. Cleopatra became Caesar's lover, bearing him a son and securing her position as ruler of Egypt. She later accompanied him to Rome, but fled to Egypt following his assassination in 44 B.C.E. After Caesar's death, the Roman Empire was divided among Caesar's great-nephew Octavian, Marcus Lepidus, and Marc Antony.

In 42 B.C.E., Antony invited Cleopatra to meet him in Tarsus, in what is now Turkey, and he, too, took her as a lover and confidante. In time, Antony began to assume the manner of an Egyptian pharaoh, naming the couple's children as kings and queens and styling himself the "king of kings." Octavian, backed by the Roman public's outrage at Antony's behavior, declared war on Antony and Cleopatra. In 31 B.C.E., Octavian defeated Antony's forces off the shore of Actium in Greece. Antony committed suicide by falling on his sword. Cleopatra was captured by the Romans and later committed suicide as well.

GREAT LIVES

Hatshepsut (ca. 1540–1483 B.C.E.)

Hatshepsut was a woman who ruled Egypt for nearly twenty years (r. 1503–1483 B.C.E.), at a time when it was virtually unthinkable for a women to hold and maintain such power. She was born in the fifteenth century B.C.E., the daughter of Thutmose I and Ahmose. When her two brothers died, Hatshepsut was in line for the throne. When her father died, however, her father's son by a commoner acceded to the throne. Thutmose II ruled for only a few years, and most historians believe that his half-sister was the power behind the throne. Though she married Thutmose, as was the custom among pharaohs, she had no children by him. When Thutmose II died, his son by a commoner succeeded him, but because he was young, Hatshepsut ruled in his stead.

Hatshepsut was reportedly a beautiful and charismatic woman who ruled for 15 years. She held on to power by styling herself the daughter of the god Amen and by portraying herself in painting and sculpture, and even dressing, as a man. Hatshepsut consolidated her power by sending expeditions to Punt (a land somewhere in eastern Africa, the precise location of which is not known today) to bring back ivory, gold, and other treasures. She built a magnificent funerary temple in the Valley of the Kings and erected two obelisks of red granite, the largest built to that time.

Thutmose III rebelled in 1458 B.C.E., at which time Hatshepsut disappeared. It is believed that her nephew killed her. After her death, Thutmose III tried to erase her name from history. Everywhere he could, he had her name excised and his own inscribed, which was made easier since the sculptures and paintings he relabeled were of a man. He also had the granite obelisks encased in masonry to cover Hatshepsut's name.

tribes and Egypt was held by the remaining eastern portion of the Roman Empire, now called the Byzantine Empire after its capital city of Byzantium (modern Istanbul). Egypt remained under Byzantine control until being conquered by Muslim Arabs in the middle of the seventh century C.E.

See also: Agriculture; Akhenaten; Alexandria; Archeological Discoveries; Art and Architecture; Culture and Traditions; Giza; Kush; Language and Writing; Myths and Epics; Nile River; Nubia; Religion; Society.

FURTHER READING

Agnese, Giorgio, and Maurizio Re. *Ancient Egypt: Art and Archaeology of the Land of the Pharaohs*. New York: Barnes and Noble, 2004.

Burstein, Stanley Mayer. *The Reign of Cleopatra*. Westport, CT: Greenwood Press, 2004.

Payne, Elizabeth. *The Pharaohs of Ancient Egypt*. New York: Random House, 1981.

Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.

Silverman, David P., ed. *Ancient Egypt*. New York: Oxford University Press, 1997.

Ghana

Kingdom in West Africa that flourished between C.E. 800 and 1200, located in parts of present-day Mauritania and Mali. The people of this medieval kingdom called their land *Wagadou*, which means "land of herds."

LINK IN TIME

Ancient Ghana and Modern Ghana

The modern country of Ghana does not share territory, history, or even ethnicity with the ancient empire of Ghana. The nation of Ghana is located about 500 miles (800 km) southeast of the ancient empire. When the British colony of Gold Coast became a nation in 1957, it chose the name of Ghana to emphasize its ties with the ancient rulers.

In 1820, when the coastal areas of Ghana came under British control, the Ashanti Empire, a confederacy of smaller kingdoms that had united under the rule of Osei Tutu I in the late sixteenth century C.E., dominated the interior of the region. Legend has it that a golden stool (*sika'dwa*) came from the heavens and rested in the king's lap. The stool is still in existence and has come to symbolize the spirit of the Ashanti. All Ashanti rulers, called Asantehenes, are crowned on the stool.

The Ashanti had become rich and powerful by trading gold and slaves for firearms, which they used to expand their kingdom. They resented the British presence, which led to a series of conflicts, including an 1824 battle in which the Ashanti were victorious. By 1901, however, the British had absorbed the land into their colony. Ashanti leaders were exiled to the Seychelles Islands, but were allowed to return in the 1920s.

The modern nation of Ghana was founded in 1957, the first African nation to win independence from its European colonizers. The people voted to establish the new nation as a **republic** on July 1, 1960, and elected Kwame Nkrumah as the first premier. Nkrumah was deposed by a military coup in 1966. Between 1966 and 1981, Ghana suffered through seven major changes in government and tremendous instability. Today, however, Ghana is regarded as a stable democracy.

The current population of Ghana is about 17 million, of whom 1.5 million are Ashanti. The current Asantehene, whose rule is ceremonial, is Otomfuo Osei Tutu III, a businessman known in private life as Nana Kwaku Dua. The current president of Ghana, John Agyekum Kufuor, was elected in 2000 and reelected in 2004. His 2000 defeat of Jerry Rawlings, who had been Ghana's president continuously since 1981, was the first peaceful transition since the country's independence.

Ghana was a word used by the Cisse people of the region that meant "warrior-king"; Arab visitors mistook the king's title for the name of the country, and "Ghana" became widely used in the West.

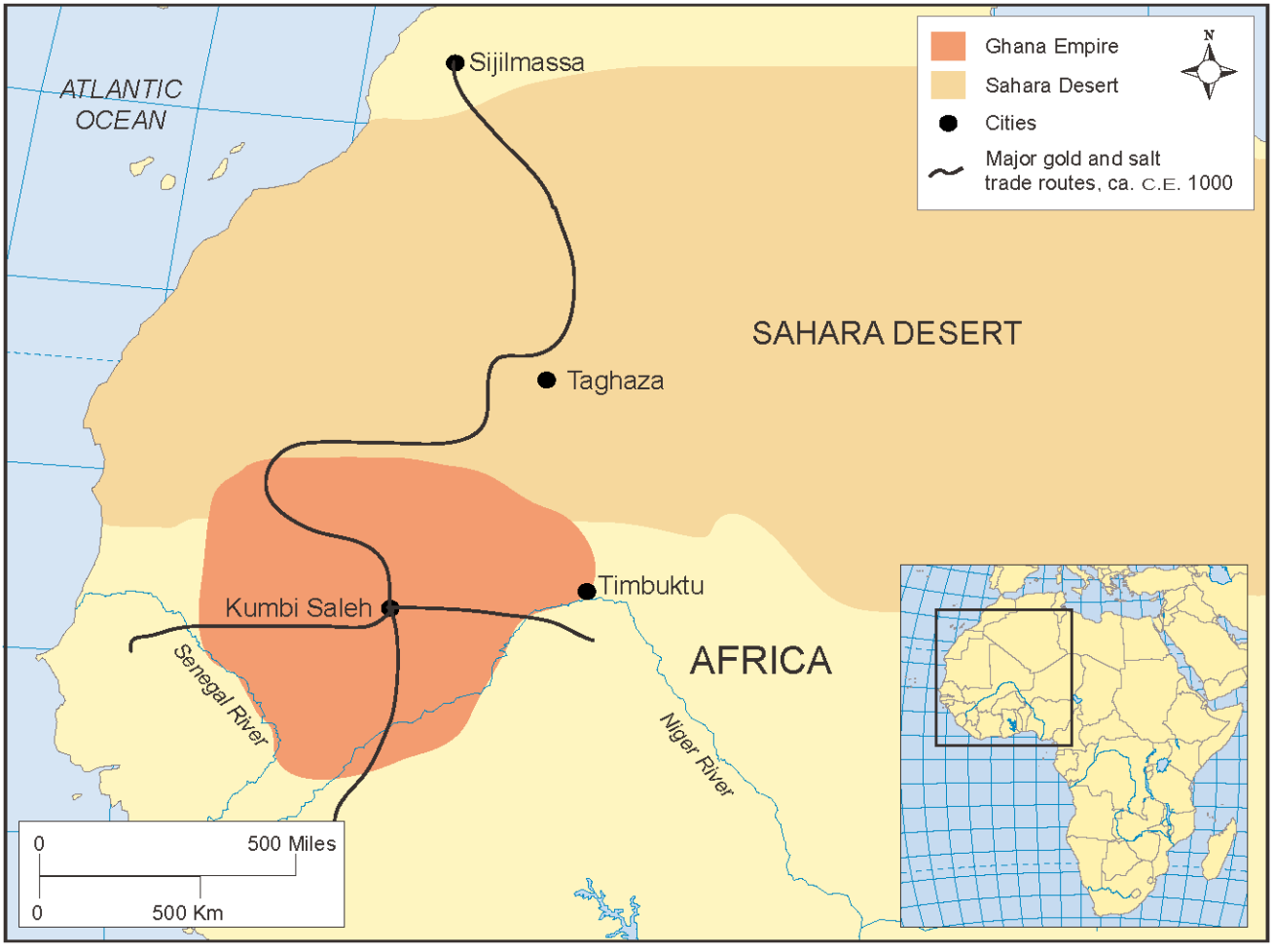
Oral tradition suggests that Ghana had existed well before Arab traders first wrote about it in the eighth century C.E. Some historians believe that Ghana may have existed 400 years earlier as a small kingdom called *Awkar*, populated by the Berber and Mandé peoples of northwestern Africa. With the introduction of the camel and other domestic animals by the Arabs, the empire of Ghana grew richer and more powerful. The use of camels provided efficient trans-Saharan trade, which in turn allowed gold-rich Ghana to establish a flourishing commercial economy. With the advent of large caravans that could carry goods across the Sahara, the Ghanaians traded gold and other goods, such as ivory and koala nuts, for salt and manufactured goods from Arab nations to the north.

Although people from many different ethnic groups formed the empire of Ghana, members of the Soninke people eventually dominated and built a capital city at Kumbi Salah, just on the edge of the Sahara. The empire expanded, controlling an increasing number of trade routes. Trans-Saharan travel was especially safe in the empire because of the strict security Ghana's centralized government provided.

In 1076, a Muslim dynasty from Morocco, the Almoravides, declared war on Ghana, disrupting

ANCIENT GHANA, CA. C.E. 1000

Ghana was the earliest empire of western Sudan. Because it controlled the trade routes from West Africa to Egypt and the Middle East, and because one of its most plentiful natural resources was gold, the region became fabulously wealthy. The name of the modern country of Ghana is derived from this ancient empire.



trade routes and creating economic hardship. In addition, Ghanaian cities had become overpopulated, the Sahara was expanding into previously fertile land, and outlying states began to rebel against Ghanaian rule. By the thirteenth century C.E., the Almoravides completely dominated the region. They were unable to successfully govern the area, however, which was eventually dominated by the Mali Empire.

See also: Berbers; Ghana; Mali; Salt Trade; Songhai Empire.

FURTHER READING

Quigley, Mary. *Ancient West African Kingdoms: Ghana, Mali, and Songhai*. Portsmouth, NH: Heinemann, 2002.

Salm, Steven, and Toyin Falola. *Culture and Customs of Ghana*. Westport, CT: Greenwood Press, 2002.

Giza

Plateau located about seven miles (11.3 km) from Cairo, Egypt, at the edge of the Sahara Desert, that is the site of the Great Pyramid and the Sphinx, a huge sculpture that has the body of a lion and the face of a man, thought to be a pharaoh.

The Giza plateau was the ideal site for the construction of a necropolis, or cemetery, adjacent to the ancient Egyptian capital, Memphis. Because it was west of the Nile River, Giza faced the setting sun. This was an important characteristic for a burial site, as the Egyptians worshipped the sun god Amen. In addition, the plateau itself served as the source for most of the material used to build the great monuments. The plateau's proximity to the river also recommended it as a construction site, because the white limestone that originally covered the pyramids was transported 500 miles (800 km) up the Nile from Aswan.

Besides the Great Pyramid and the Sphinx, the plateau is home to two other pyramids—the Pyramid of Khafre and the Pyramid of Menkaura—and hundreds of mastabas, the oldest form of Egyptian tombs. Mastabas were graves lined with stones, mud bricks, or wood, and covered with rectangular buildings. *Mastaba* means "bench" in Arabic, and the graves do indeed resemble benches, especially when seen from a distance.

The Great Pyramid is the only one of the Seven Wonders of the Ancient World still in existence. It was built during the reign of the pharaoh Khufu (2551–2528 B.C.E.). The ancient Greek historian Herodotus claims that it took 20 years to build the pyramid, an estimate that modern scholars agree is probably correct.

The pyramid is an amazing feat of engineering. The four sides of the base each measures 755 feet (230 m), and the pyramid is 481 feet (146 m) tall, the height of a 50-story building. It was built with 2.5 million limestone blocks, each weighing 5,500 pounds (2,500 kg). Its sheer size and the precision with which it was constructed—with each side almost perfectly oriented to each of the four cardinal compass points—would be difficult to duplicate even with modern technology. All of the pyramids of Giza were once covered with white limestone, so that they glittered brightly in the sun. The limestone was stripped from the pyramids in C.E. 1356 by an Arab sultan in order to build mosques and fortresses in Cairo.

The purpose of the Great Pyramid remains a mystery. Some scholars believe that it, like other Egyptian pyramids, was intended as a pharaoh's tomb. Others dispute that claim, since this pyramid is so different from those intended as tombs. No body has ever been discovered in the Great Pyramid. Most of the structure is solid, with ascending and descending passageways leading to a grand gallery and two smaller rooms. The purpose of the grand gallery is unknown. Some **archeologists** believe that the pyramid may have been intended as a site for religious **rituals**, others think it might have been an astronomical observatory, but no one knows for sure.

See also: Art and Architecture; Egypt; Nile River; Religion.

FURTHER READING

Agnese, Giorgio, and Maurizio Re. *Ancient Egypt: Art and Archeology of the Land of the Pharaohs*. New York: Barnes and Noble, 2004.

Lawton, Ian, and Chris Oglivie-Herald. *Giza: The Truth: The People, Politics, and History behind the World's Most Famous Archeological Site*. Montpelier, VT: Invisible Cities Press, 2001.

Great Zimbabwe

Ruins of a great city that flourished between C.E. 1000 and 1400, located on the Harare Plateau in the modern nation of Zimbabwe. Great Zimbabwe is the largest of more than 100 stone ruins that extend for many miles through southeastern Africa and was the center of a powerful and wealthy medieval state.

LINK IN TIME

European Finding of Great Zimbabwe (C.E. 1871)

The story of the European discovery of Great Zimbabwe is an unfortunate tale of narrow-mindedness and racism. Although Portuguese explorers heard stories of a fortress built of huge stones, there are no records of Europeans visiting Great Zimbabwe until 1871, when a German geologist, Carl Mauch, was led there by a party of Karanga tribesmen. After examining the ruins, Mauch concluded that a "civilized nation must once have lived there." By "civilized" he meant "white." One of Mauch's "proofs" for this theory was a wooden lintel that he thought was made of cedar. Thus, he concluded, the wood must have been brought from Lebanon by the Phoenicians—and Great Zimbabwe had been built by the Queen of Sheba. In fact, the wood was sandalwood, native to Africa.

Cecil Rhodes, a director of the British South African Company (BSA) and founder of the colonial nation that was to bear his name, Rhodesia, hired an antiquarian with no experience in African archeology, Theodore Bent, to investigate Great Zimbabwe. It was in Rhodes's interest to further the myth that the site was not of African origin, since he, like other European colonists, wanted to believe that Africans were incapable of governing themselves, much less building sophisticated stone cities. This myth helped justify the colonization of Africa and exploitation of the native peoples. Although Bent found many **artifacts** that were clearly African, he concluded that people "akin to the Phoenician and Egyptian" had built the structure.

Bent was followed by Richard Nicklin Hall, a journalist whose job it was to preserve the site but who decided to prove that the ruins were Arabic in origin. To do this, he removed what he called "the filth and decadence of Kaffir [African] occupation," disposing of 12 feet of stratified archeological deposits. Hall's actions were condemned by later **archeologists** because they lost, forever, invaluable data that could have helped scholars learn about the site and its occupants.

Hall was dismissed, and in 1905 the BSA brought in archeologist David Randall-MacIver, who concluded that the site was "unquestionably African in every detail." Despite his certainty, many Europeans who remained in Rhodesia did not believe him. It has only been since the end of colonial rule in Rhodesia in 1980 that true scholarly work has been undertaken without government interference. During the struggles of the native people against their colonial rulers in Rhodesia, Great Zimbabwe became a symbol of black liberation, leading the newly freed nation to take the name Zimbabwe in 1980.

Archeologists have dubbed this tower at Great Zimbabwe the "beehive" and believe it may have been a royal residence. The walls were built beginning in about C.E. 1250, and construction continued into the fifteenth century. (I Vanderharst/Robert Harding World Imagery/GettyImages)

What remains of Great Zimbabwe today are three major areas of ruins that extend over about 1,800 acres (730 hectares). The so-called Hill Complex comprises a number of stone walls built on top of a 260-foot-high (80-m-high) granite hill, including a massive stone obelisk. **Archeologists** believe the king may have lived and held court there, or that the area was a religious center.

Below the Hill Complex is a huge elliptical wall known as the Great Enclosure. Again, no one knows for certain what purpose the enclosure served, but there is speculation that it may have housed the king's most important wife or that it may have been a school, the center for religious **rituals**, a harem, or a royal court. Inside the Great Enclosure are more than 300 structures, including a shrine and a mysterious beehive-shaped tower that is believed to have been a workshop for fashioning gold objects. The Great Enclosure also contains a number of passageways. The third area is known as the Valley Complex; it housed the majority of the population of Great Zimbabwe, which archeologists now estimate to have been about 18,000 people at its peak.

The wall that surrounds the Great Enclosure is an amazing architectural accomplishment and is the largest ancient stone structure south of the Sahara Desert.

The wall winds sinuously for 800 feet (243 m) with no corners or right angles. It is 16 feet (4.8 m) thick and 32 feet (9.9 m) high, and was made from more than one million granite blocks hewn from the nearby cliffs. The local climatic combination of hot days and cold nights caused the granite to expand and contract. As a result, the granite split naturally into rectangular slabs that were fit together so neatly by the masons of Great Zimbabwe that no mortar was needed.

The culture that built Great Zimbabwe was not literate and thus left no written records. More remarkably, no oral tradition exists either. There seems to be substantial agreement that the Bantu-speaking Shona people built the city, although some have proposed other ethnic groups who live nearby.

Great Zimbabwe is, unusually for an ancient city, not built near a river, and the surrounding soil on the Harare plateau can be cultivated only with difficulty. Some scholars speculate that the city was built on this site to satisfy some religious purpose, perhaps to honor the Shona deity Mwari. Others have theorized that the city was built near a mine and served as a combination smelter, fort, gold storage facility, and temple. Astronomer Richard Wade of the Nkwe Ridge Observatory in South Africa has recently theorized that Great Zimbabwe may have been, like Stonehenge in England, an astronomical observatory.

Whatever its purpose, Great Zimbabwe was abandoned by C.E. 1500. No one knows why, but most historians speculate that overgrazing and drought led to famine, which in turn led the people to move to better land. It is also possible that, if Great Zimbabwe indeed housed a mine, the gold ran out. Yet the mystery remains; no one really knows why the people left.

See also: Archeological Discoveries; Art and Architecture; Bantu Migration; Language and Writing; Religion.

FURTHER READING

Garlake, Peter. *Life at Great Zimbabwe*. Gweru, Zimbabwe: Mambo Press, 1983.

Hall, Martin, and Rebecca Stefoff. *Great Zimbabwe*. New York: Oxford University Press, 2006.

Greek Colonies

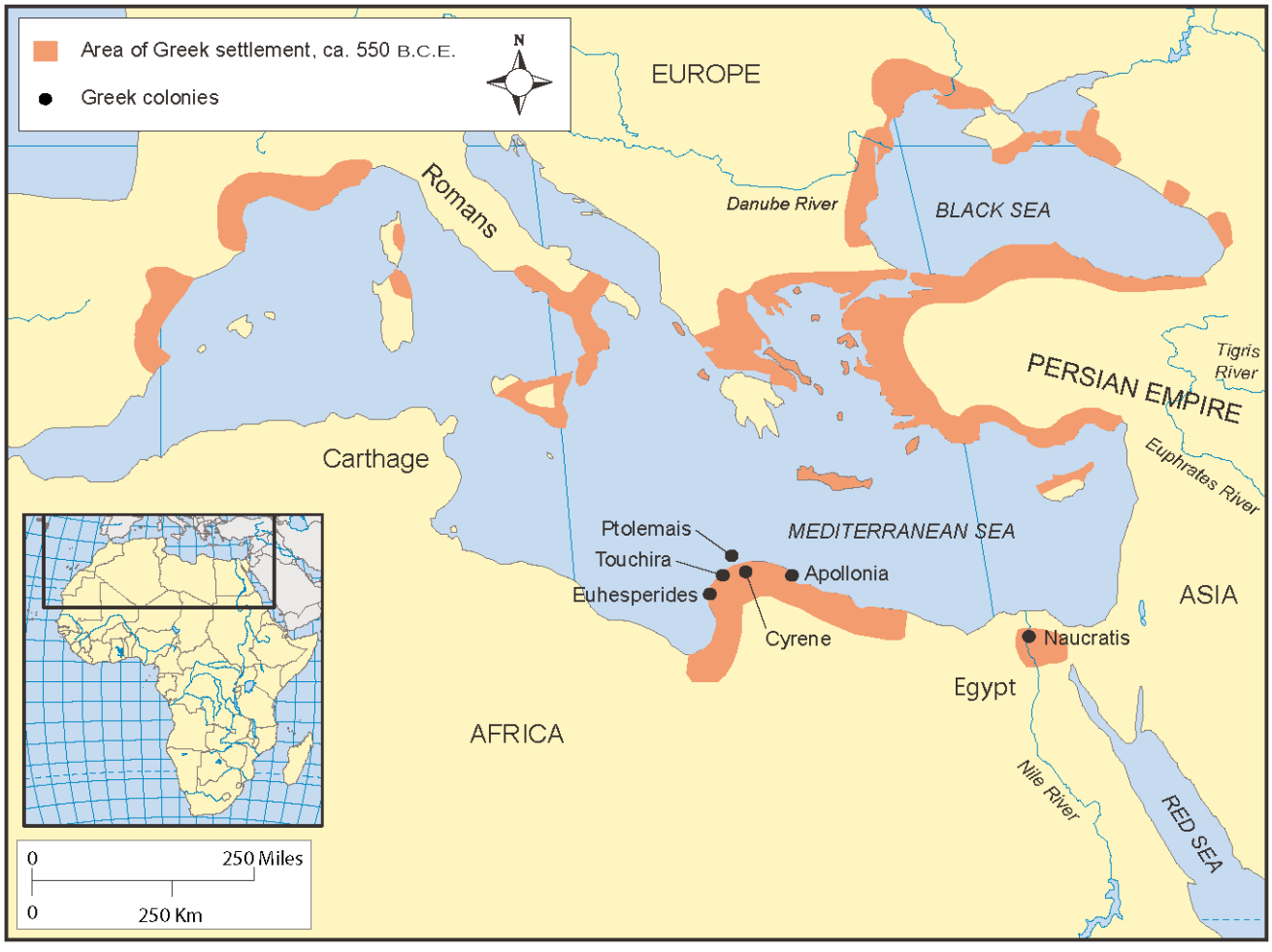
Settlements founded by the ancient Greeks along the Mediterranean coast, beginning in the seventh century B.C.E., including many in northern Africa. The Greeks founded colonies for a variety of reasons. Sometimes cities established colonies because they became too crowded and needed more land for their expanding populations. Civil unrest often led the losing faction to chose to settle elsewhere. Most often, however, colonies were established to make it easier for Greek cities to trade with foreign nations.

The Greeks established two kinds of colonies, called *apoikiai* and *emporia*. *Apoikiai* were intended to become city-states in their own right, whereas *emporia* were founded primarily as trading outposts. The establishment of a new colony was a solemn occasion that usually included consultation with an **oracle**. Those chosen to emigrate might include only certain classes of people, or one son would be sent from each family that had more than one. The emigrants might carry with them sacred fire from the public hearth to ignite a fire in the new city. Once settled, the migrants would maintain close ties with the parent city, adopting its laws and consulting it on important issues.

The most important Greek settlement in Africa was the city of Cyrene, which was founded around 630 B.C.E. in what is now Libya. Emigrants from the island of Thera, which had suffered devastat-

INDEPENDENT GREEK COLONIES

The northern coast of Africa, between Carthage and Egypt, was home to several ancient Greek colonies. Among the most important was the city of Cyrene, founded in 630 B.C.E. Although the colonists often maintained ties with their city of origin, Greek colonies were always independent from the founding city-state.



ing droughts, founded the city. Cyrene was ideally located, about 10 miles from the Mediterranean Sea, on a hillside. Terraces led down to its port, called Apollonia. The climate was pleasant, the land fertile, and Cyrene quickly became a wealthy and powerful city-state, founding other colonies, most notably Barca to the west in about 560 B.C.E. One of Cyrene's most important exports was the herb silphium, which was overharvested and is now extinct.

The native people of Libya resented the Greek settlers. During the reign of the Greek Aristoteles, also called Battus II (r. 583–560 B.C.E), new settlers from Thera came to Cyrene and were given land that had been taken from the Libyans. The Libyans asked Egypt to help them regain their land, but the Egyptian armies were defeated. The Cyreneans then made alliances with the Egyptians and their Persian conquerors in order to protect themselves from the Libyans. Eventually, however, Cyrene became part of the Egyptian empire of the Ptolemaic dynasty (323 to 30 B.C.E.) and then fell under Roman control. An earthquake in C.E. 365 destroyed the city.

Cyrene was home to the mathematician Theodorus; the poet Callimachus; and the scholar Eratosthenes, the first person to estimate the circumference of the Earth. It was also the home of Simon of Cyrene, noted in the New Testament for helping Jesus of Nazareth carry his cross.

See also: Libya.

Hannibal

See Carthage.

FURTHER READING

Boardman, John. *The Greeks Overseas: The Early Colonies and Trade*. London: Thames and Hudson, 1999.

Burckhardt, Jacob. *History of Greek Culture*. London: Dover, 2002.

Ibn Battuta (C.E. 1304–ca. 1377) (eebin bahtuta)

Islamic scholar who traveled more than 75,000 miles (120,000 km) and visited every country of the Dar al-Islam, or Islamic world, of the fourteenth century C.E. His fascination with the different peoples and places he encountered led him to compile a record of his travels. This work has served later scholars as a rich source of information about the **cultural history** and **social history** of the medieval Islamic world.

Born in Tangier, Morocco, Ibn Battuta was educated at the *madrassa*, or Islamic religious school, in Tangier. At the age of 21, he undertook the *hajj*, or pilgrimage, to the holy city of Mecca that is the duty of every devout Muslim.

Unlike most other pilgrims, Battuta did not return home after his trip to Mecca. Instead, he resolved to travel the entire Islamic world, which at the time stretched from Spain across North Africa, throughout Southwest Asia, and as far east as Indonesia. Battuta's travels lasted nearly 30 years. He traveled a greater distance than any other person before him and visited such far-flung places as Persia, Ethiopia, Zanzibar, India, China, Turkey, Russia, and Ceylon.

When Battuta returned to Morocco in 1354, the sultan ordered him to dictate his adventures to a young writer, Ibn Juzayy. The title of the book that resulted from this collaboration was *A Gift to Those Who Contemplate the Wonders of Cities and the Marvels of Traveling*, but it is often referred to today as *The Rihla*, which is an Arabic word akin to "travelogue."

Scholars today study Battuta's book because it provides information about everyday life in the fourteenth century C.E. that exists nowhere else. Of particular interest to those who study ancient Africa are two trips Battuta made, one down the eastern coast of the continent in 1331, and another through western Africa along the Niger River to the kingdom of Mali.

Battuta was a religious man who judged black Africans on the extent of their devotion to Islam. For example in Mombassa in what is now Kenya, Battuta describes the people as "trustworthy and righteous," and notes that "Their mosques are made of wood, expertly built. At every door of the mosques there are one or two wells." On the other hand, in Walata, in what is now Mauritania, he is offended that the women are "not modest in the presence of men," do not wear the veil, and take sexual partners outside marriage.

Battuta was an acute observer and gives vivid insights into daily life. He describes how people dressed, what they ate, and how they behaved. In Mali, he notes, there was little crime and people could travel with no fear of being robbed. He adds that the people "meticulously observed the times of the prayers and attendance at them." He disliked what he saw as immodesty among the women and the practice of eating animals that had not been slaughtered according to religious rules.

Little is known about Battuta's life after the publication of his book. Even the date of his death is uncertain. For nearly 400 years after his death, his book was little read. Scholars rediscovered his work in the nineteenth century C.E., and his reputation continues to grow even today.

See also: Mali; Mauretania; Religion.

FURTHER READING

Dunn, Ross E. *The Adventures of Ibn Battuta: A Muslim Traveller of the Fourteenth Century*. Berkeley: University of California Press, 1990.

Hamdun, Said, Noel King, and Ross E. Dunn. *Ibn Battuta in Black Africa*. Princeton, NJ: Wiener, 2005.

Islam

See Ibn Battuta; Religion.

Kinship

See Culture and Traditions.

Kongo Empire

Central Africa kingdom that reached the height of its power in the fifteenth century C.E., located in present-day Angola and parts of the **Republic** of the Congo and the Democratic Republic of the Congo. Kongo became the most important state in an extensive central African trade network. It grew rich from selling slaves, ivory, **textiles**, and pottery, as well as from the **tribute** it demanded from several smaller neighboring kingdoms.

Founded by Bantu-speaking people known as the Bakongo in the fourteenth century C.E., the Kongo Empire was divided into six states: Sonho, Bamba, Pemba, Batta, Fango, and Sundi. A governor appointed by the king administered each state. The area of the kingdom spanned more than 50,000 square miles (130,000 sq km).

Kongo was likely the first kingdom in western Africa to have contact with Europeans. A Portuguese explorer, Diogo Cão, arrived at the capital city of Mbanza-Kongo in 1483 and persuaded the *manikongo*, or king, Nzingu Kuwu, to exchange emissaries with Portugal. Soon after, the manikongo asked the Portuguese to send missionaries and military advisers to Kongo in exchange for ivory, copper, and the other riches of the area, which included diamonds.

Nzingu Kuwu converted to Christianity and took the name João I. By 1500, his eldest son, Nzingu Mbemba, had also converted to Christianity. After his father's death in 1505, Nzingu Mbemba seized the throne and ruled as King Afonso I (r. 1505–1543), changing the name of his capital city to São Salvador. Afonso's seizure of the throne was in keeping with European systems of inheritance, but in violation of local custom. When Afonso defeated his half brother, who claimed the throne, he attributed his victory to the intercession of the Virgin Mary and St. James, thus using Christianity to lend authority to his rule.

This brass crucifix, known as the Nkangi Kiditu Crucifix, is from the ancient Kingdom of the Kongo and depicts Christ as a black man. Portuguese traders were influential in converting the people of Kongo to Christianity. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

Christianity in Kongo took on a distinctive African character—some taught that Jesus was born in the Kongo, for example—and was easily incorporated into existing religious **ritual**. The Kikongo catechism (1555) was the earliest printed text in a Bantu language.

At first the alliance with the Portuguese was mutually beneficial. Trade flourished, and many new plants were imported into Kongo—including guava, lemon, orange, papaya, pawpaw, mango, kumquat, and pineapple—all of which did well in the tropical climate.

The slave trade, however, proved to be the undoing of Kongo. As the Portuguese expanded their empire in the Americas, they saw Kongo primarily as a source for slaves to work Portuguese plantations in Brazil. It is estimated that the Portuguese enslaved 10,000 people each year. By the 1520s, most of the missionaries who had come to Kongo had returned home, and the Portuguese who remained were primarily slave traders.

In 1526, Afonso wrote to Portuguese King João III, his "brother monarch," asking him to end the slave trade. He said, in part,

> [your people] in order to satisfy their voracious appetite, seize many of our people . . . And as soon as they are taken by the white men they are immediately ironed and branded with fire . . . so great, Sir, is the corruption and licentiousness that our country is being completely depopulated. That is why we beg of Your Highness to help and assist us in this matter . . . because it is our will that in these Kingdoms there should not be any trade of slaves nor outlet for them.

His request, however, was ignored. Over time, the empire was seriously weakened by the depletion of its population, making it vulnerable to attacks by internal factions and neighboring states.

Afonso's successors encountered years of unrest and civil war, which many scholars believe was fomented by the Portuguese in order to keep the rulers weak so the slave trade could continue unimpeded. Afonso's successor, Diogo I (r. 1545–1561), fought a violent civil war and was eventually replaced by a successor chosen by the Portuguese, Alvaro I (r. 1568–1587). Alvaro and his successor Alvaro II (r. 1587–1614) sought to increase their power and to confine Portuguese expansion to the southern parts of the territory. After the death of Alvaro II, however, the Portuguese governor of neighboring Angola attacked Kongo, capturing many slaves.

For the next 50 years, there were a series of conflicts between the Portuguese colonists and the kingdom of Kongo. Moreover, Kongo underwent a great deal of internal turmoil over succession to the throne, eventually leading to the disintegration of the kingdom. A visitor to Mbanza Kongo in 1678

LINK TO PLACE

Africa's First Roman Catholic Dynasty

When Diogo Cão came to Kongo in C.E. 1484, he invited some Kongolese to visit Portugal. When they returned to Kongo, the *manikongo*, or king, Nzingu Kuwu (r. ca. 1480–1505), was impressed by what they learned. He eventually converted to Christianity and took the Portuguese name João I. However, João soon recanted because Christianity forbad polygamy, and the king had many wives. His son, Nzingu Mbemba, converted to Catholicism, taking the name Afonso I, and remained a Catholic all his life. Thus began Africa's first Catholic dynasty. According to John Reader, in *Africa: A Biography of the Continent* (1998), Afonso was an intelligent man who genuinely believed in Christian **doctrine**. He also admired the European way of life and adopted Portuguese clothing and manners.

Catholicism was advantageous to Afonso partly because it facilitated his rise to power. Under the traditional system, he, as eldest son, would not have acceded to the throne. He adopted the Christian-European political ideology to support his rule and defeated his brother to win the throne in 1506.

All the kings who ruled Kongo for the next 150 years were Catholic. Like Afonso, later rulers wrote to kings and popes to beg for help to end the slave trade and eliminate Portuguese influence. Alvaro II wrote to Pope Paul V in 1613 complaining that he is "very badly treated by the Portuguese and the prelates," and notes that he hides the truth "so that the pagan kings may not be glad of it." But there was little help for Kongo from those they believed to be their spiritual brothers and sisters.

At the battle of Mbwila in 1665, the last member of the original Catholic dynasty, Antonio I, was defeated by Portuguese forces and decapitated. After his death, the once great empire disintegrated into a number of minor kingdoms.

noted that the city had been utterly destroyed and overrun by elephants.

See also: Bantu Migration; Religion.

FURTHER READING

Hilton, Anne. *The Kingdom of Kongo*. Oxford: Clarendon, 1985.

Jordan, Manuel. *The Kongo Kingdom*. New York: Watts, 1999.

Kush

Ancient Nubian kingdom that flourished from 1700 B.C.E. through C.E. 350. Kush was a black African kingdom that influenced and was influenced by Egypt. Indeed, Kushite kings ruled Egypt itself for nearly 100 years.

The period during which Kushites dominated the region of Nubia (which lay just south of Egypt) can be divided into three phases, each referred to by the kingdom's capital city at the time: Kerma, Napata, and Meröe. The first city, Kerma, was the capital of a Nubian kingdom known as Yam, but by 1700 B.C.E., it had become the capital of the Kushite kingdom. The earliest structures built

there—including homes and palaces—were round, based on traditional African architecture. Later structures are rectangular, influenced by Egyptian architecture.

A cemetery to the south of the city reveals a great deal about Kushite culture. That Kush was a stratified society is illustrated by the differences between the tombs of ordinary people and those of the ruling class. The dead were buried in oval pits, about five feet (1.5 m) deep, with offerings buried with the dead—the elite with food, pottery, weapons, horses, and dogs; the common people with much less. In many of the larger graves, there are several skeletons, indicating that many people were buried along with members of their household. One tomb holds more than 300 servants who were sacrificed with their master.

Bodies were placed on wooden or stone beds in the fetal position, heads facing the rising sun to symbolize the idea of a new life after death. Kings' tombs often included huge stone boats, perhaps intended to ferry them to the next world. The burial mounds were covered with millions of black and white pebbles.

As part of an expansion effort, Egypt attacked Kush in 1950 B.C.E. and by 1425 B.C.E. dominated most of upper and lower Nubia. A great deal of Egypt's wealth came from Nubia. Gold, slaves, wood, resins, gemstones, skins, cattle, ivory, and exotic animals were imported into Egypt through Nubia. Nubians were brought to Egypt as slaves and served in the Egyptian military; young Nubian noblemen were raised in the Egyptian court. The Egyptians built hundreds of temples in Nubia and intermarried with the indigenous population. Nubians readily accepted Egyptian culture and religion.

One of the most important sites for worship of the Egyptian god Amen was in Nubia at Gebel (or Jebel) Barkal, a mountain near Napata from which projects a huge stone pinnacle. Recent **historical research** suggests that both Egyptians and Nubians regarded this site as one of the holiest in the entire empire, and that Egyptian pharaohs came to Nubia to be crowned. Gebel Barkal later became important to the Nubian pharaohs as a sign of their right to rule both Egypt and Nubia.

After the death of Pharaoh Rameses III in 1156 B.C.E., Egypt fragmented into several smaller kingdoms. As a result, between 1100 and 800 B.C.E., Nubia was free from Egyptian control. Little, however, is known about this period in Nubian history.

In the eighth century B.C.E, a new Kushite kingdom, centered in Napata, arose. The kingdom grew rich as a result of its dominance over trade routes from the south and its access to gold and precious gems. The ruling elite became thoroughly Egyptianized, perhaps through contact with Theban priests of Amen. The Kushite king Kashta (r. ca. 760–747 B.C.E) conquered all of northern Nubia and declared himself "King of Upper and Lower Egypt," although there is no evidence that he actually ever visited Egypt.

Kashta's son Piye, also known as Piankhy, succeeded in conquering Upper (southern) Egypt, and founded Egypt's Twenty-fifth Dynasty. Piye ruled both nations from Napata, but in the twenty-first year of his reign, he moved into Egypt to quell a rebellion fomented by kings of the Nile Delta. Uncharacteristically for a ruler of his day, Piye noted that he disliked bloodshed and forgave his enemies. Some historians speculate that these sentiments were characteristically Nubian.

The Kushite pharaohs ruled Egypt for nearly 100 years (760–671 B.C.E.). They are credited with orchestrating a renaissance of many Egyptian values and traditions that had been abandoned over the years. They revived the pyramid as the proper royal tomb; over the centuries, the Kushites built 228 pyramids, three times more than did the Egyptians, though of a slightly different design. They also built magnificent temples and sponsored a revival of painting and sculpture in the Egyptian style.

During the early seventh century B.C.E., an Assyrian army drove the Kushites out of Egypt. Although the Kushites reconquered Egypt in 663 B.C.E., within a year they again were defeated and forced to abandon the country. Nevertheless, Kushite kings continued to proclaim themselves pharaohs; they spoke the Egyptian language, used **hieroglyphic** writing, and worshipped Egyptian deities.

These pretensions may have angered later Egyptian kings. In any case, in 593 B.C.E., Psammeticus I of Egypt invaded Kush and sacked Napata. Little is known about Kushite culture after this period. Historians had once thought that the Kush moved their capital from Napata to Meröe during this time, but most now believe that Napata was never the capital—that it was, in fact, a religious center. Nevertheless, the period between 600–300 B.C.E. is often referred to as the Napatan period, and the period after 300 B.C.E.—when the Kushite kings began to be buried in Meröe—as the Merötic period.

In the interim, as is clear from archeological **excavations** of Meröe, Kushite culture began to shed many of its Egyptian characteristics and become more Africanized. Images of members of the royal family show that their costumes and headdresses were quite different from the Egyptian styles they had adopted earlier. Nubian deities were added to the **pantheon** of Egyptian gods, notably Apedemak, a lion-headed god who was regarded as the king's protector. Meröe even developed its own language, whose script has never been deciphered. Thus, much about the Kushite culture in Meröe is shrouded in mystery. Meröe flourished until 359 B.C.E., when it was destroyed by an attack of Axumites from Ethiopia.

See also: Archeological Discoveries; Axum; Egypt; Language and Writing; Nile River; Nubia; Religion.

FURTHER READING

Burstein, Stanley Mayer, ed. *Ancient African Civilizations: Kush and Axum*. Princeton, NJ: Wiener, 1998.

Ma'At-Ka-Re Monges, Mariam. *Kush: The Jewel of Nubia: Reconnecting the Root System of African Civilization*. Trenton, NJ: African World Press, 1997.

Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. Princeton, NJ: Wiener, 1998.

L

Language and Writing

Geneticists and other scholars suggest that the uniquely human ability to use written and spoken language may have originated in ancient Africa. In fact, all language may be descended from the so-called "click" languages spoken today.

Click languages are spoken in the Kalahari desert by several groups including the Ju'hoansi, and near Lake Eyasi in Tanzania, by the Hadzabe and the Sandawe. Each of the languages has four or five click sounds that are made by sucking the tongue down from the roof of the mouth, something akin to the English sound *tsk-tsk*. The upright bar in the word *Ju?'hoansi* indicates a click sound. The word, then, is pronounced *ju-twansi*, with the *tw* pronounced with a distinct click.

Many scholars believe that the landscape of Africa itself was a major force in the development of speech. They say that the origin of language lies in the kinds of adaptations that human ancestors developed in order to be able to survive in the savannahs of Africa. The African environment, it is believed, encouraged the development of the **physiological** characteristics that allowed spoken language to develop.

EMERGENCE OF WRITTEN LANGUAGE

Few of the groups speaking ancient African languages developed writing systems. In general, small **tribal** groups do not need writing, but larger, more complex groups do. Thus, as complex civilizations emerge, the need for writing grows. In ancient Egypt, for example, a huge government **bureaucracy** arose partly in order to manage the complex process of irrigating farm fields with floodwaters from the Nile. Eventually a system of writing was required to keep track of economic transactions, government information, and religious ideas.

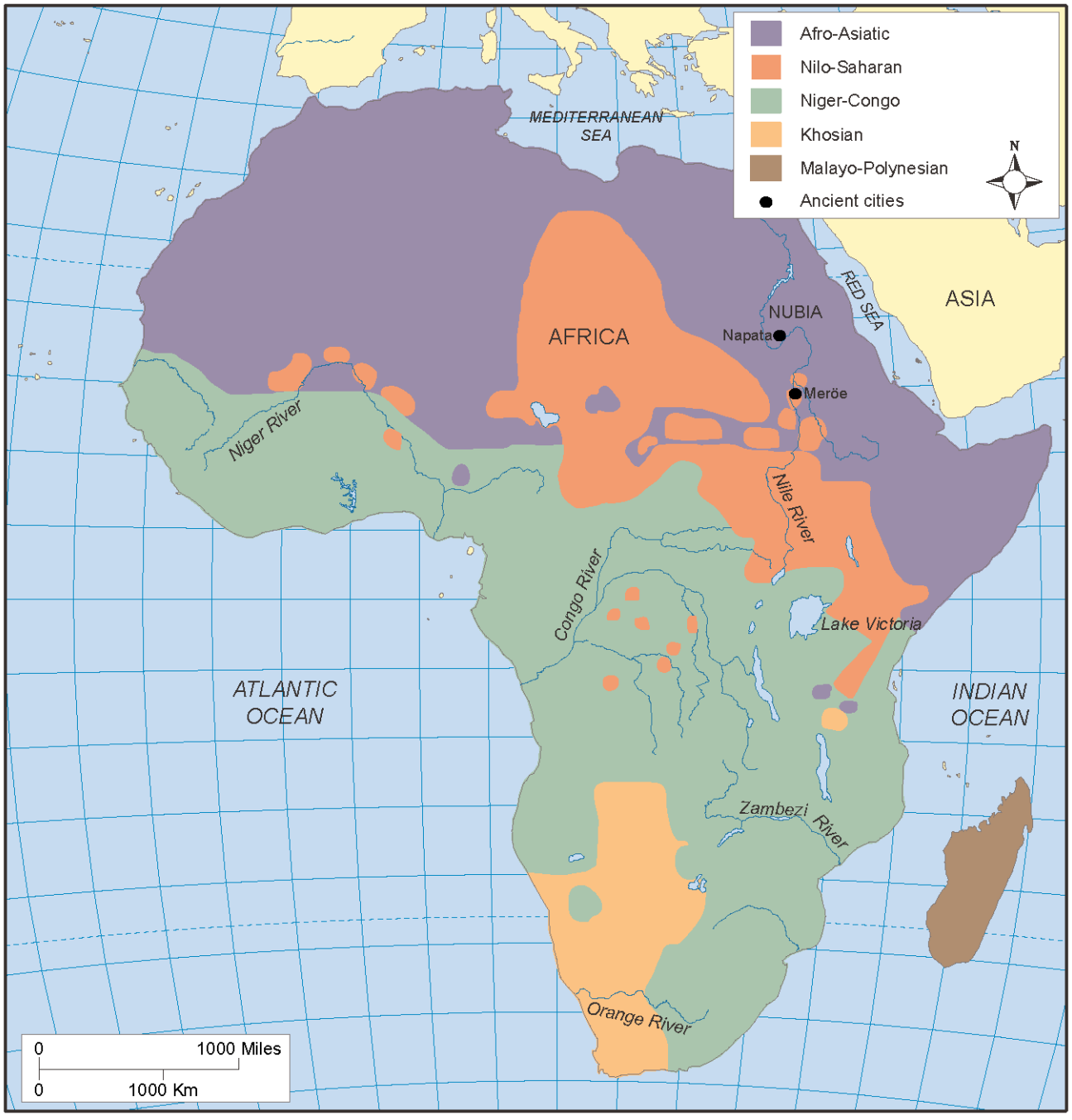
Many scholars believe that the first writing system, or **syllabary,** arose in Sumer, in what is now Iraq, about 3100 B.C.E. This writing system used a kind of script known as **cuneiform** because the characters were wedge-shaped. In C.E. 1998, however, Günter Dreyer, a German **archeologist** working in Egypt, announced that **hieroglyphs** found in Abydos, Egypt, might suggest that Egyptian was actually the first writing system, predating the Sumerian by as many as 300 years. Certainly, the Egyptians themselves never acknowledged borrowing from the Sumerians. They believed that their form of writing came to them as a gift from Thoth, the god of learning. The Egyptians called hieroglyphs *medu netjer*, "words of god."

Egyptian Hieroglyphics

Regardless of their origins, **glyphs** evolved along the same path as Sumerian writing. Both began by

MAJOR LINGUISTIC GROUPS

This map shows the major language families of ancient Africa. The largest families were Afro-Asiatic, with languages spoken along the northern coast of the continent, and Niger-Congo, spoken throughout the southern part of the continent.



using **pictograms** or **pictographs,** drawings that represent words. The hieroglyph for an eagle, for example, is a simplified drawing of an eagle. Pictograms are still commonly used in mass communication today; the stylized drawings of men and women on restroom doors are pictograms.

LINK IN TIME

The Rosetta Stone

In July 1799, French soldiers in Napoleon Bonaparte's army discovered the key to a centuries-old mystery. The soldiers, who had occupied northern Egypt, were defending the far-flung French Empire from the Ottoman Turks to the east. Near the town of Rosetta, they dug in the sand to fortify their defensive position. While digging, Lieutenant Pierre Bouchard, a young engineer who was also interested in archeology, came upon a large stone 4 feet (122 cm) high, 2.5 feet (76 cm) wide, and weighing 1,584 pounds (720 kilos).

Although parts of the stone had broken off, three **inscriptions** remained distinct. The soldiers could not decipher the top two inscriptions, one of which appeared to be written in **hieroglyphics**, but some of them read Greek and immediately recognized the third inscription near the bottom of the stone. It read: "This decree shall be inscribed on . . . hard rock in sacred characters, both native and Greek."

Hearing of this discovery, some **archeologists** believed that all three inscriptions contained the same message. The Rosetta Stone, it appeared, held the key to unlocking the mystery of Egyptian hieroglyphics. Before this time, archeologists did not know how to translate hieroglyphics.

Even with the possible clues on the Rosetta Stone, it took 23 years before French language scholar Jean-François Champollion completed the translation. The task was a daunting one because no one knew for sure if the three inscriptions were identical. After years of work, Champollion determined that the middle inscription was in **demotic**, a simplified form of hieroglyphs used by the common people of Egypt. Champollion succeeded where other scholars had not because he knew **Coptic**, a language descended from the ancient Egyptian. By noting similarities between the demotic and the Coptic, Champollion was able to prove that some of the hieroglyphs represented sounds, which enabled him to translate the hieroglyphs. Champollion's *Grammaire Égyptienne* (*Egyptian Grammar*) was published posthumously in 1841. The Rosetta Stone indeed solved the mystery.

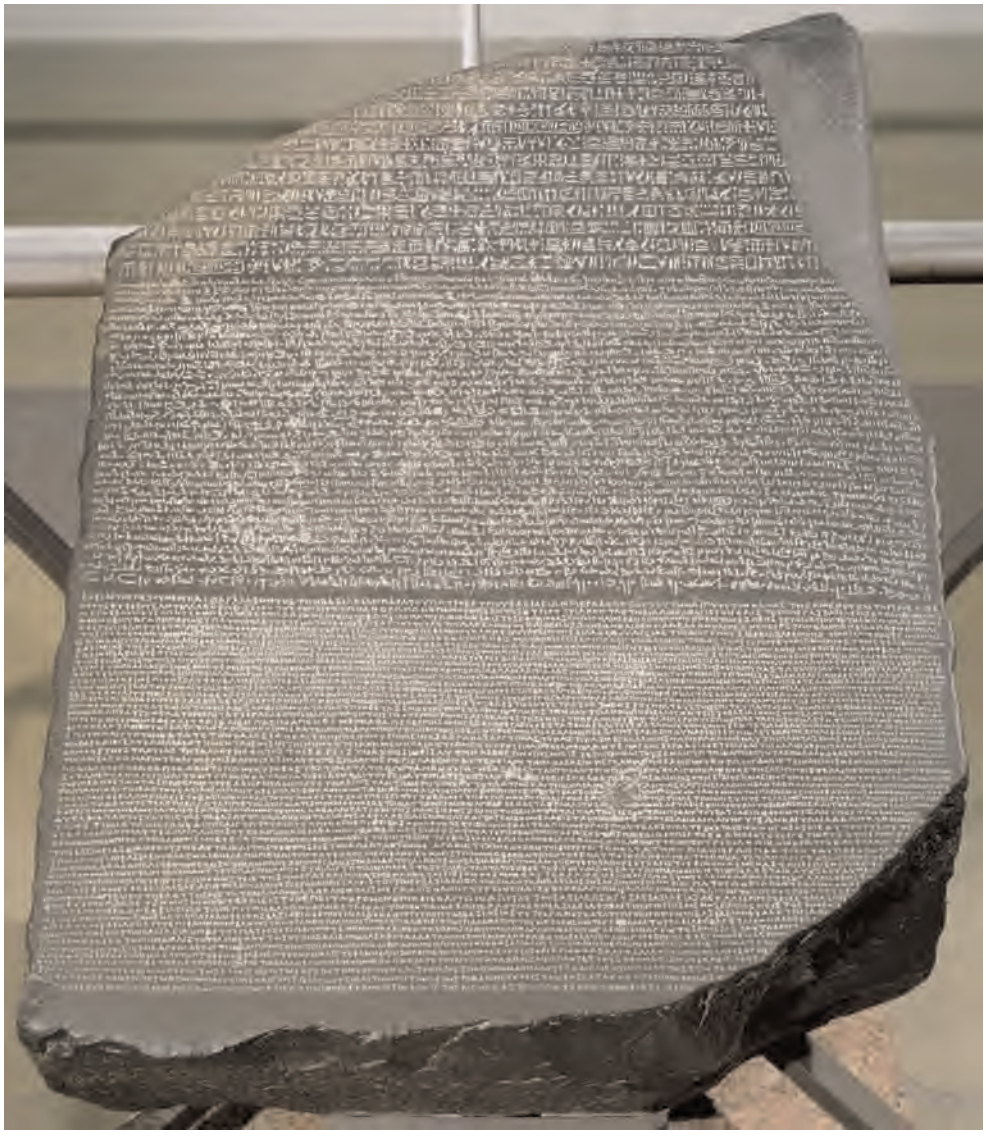
For many years the Rosetta Stone has been housed at the British Museum in London. In 2003, the Egyptian government demanded that the **artifact** be returned. To date, the British have not complied.

However, pictograms are of limited use because they cannot express complex ideas. The Egyptians thus developed **ideograms**, pictures that represent ideas. For example, the Egyptian hieroglyph of a musical instrument conveyed the idea of pleasure. Modern ideograms include a sign with a picture of a cigarette with a slash through it, universally understood to mean "no smoking."

Eventually, Egyptian **scribes** began to assign a sound to some pictograms. Such symbols are called **phonograms**. Most modern alphabets are made up entirely of phonograms. Phonograms give a language greater flexibility. For example, the use of phonograms allowed Egyptian scribes to write the names of foreign visitors, something they were unable to do before this innovation.

The Egyptians never standardized the direction of their script, and scribes sometimes wrote from left to right, sometimes from right to left, and sometimes vertically. To make matters more complicated, a scribe might write in several different directions in the same text. Fortunately, there was one standardized element: the first hieroglyph of each line faced in the direction in which the line was to be read.

Egyptian writing took a leap forward with the invention of **papyrus** between 3100 and 2900 B.C.E. Egyptian scribes found that fashioning hieroglyphs



The Rosetta Stone contains essentially the same text written in two different languages—Greek and Egyptian. The Egyptian text is written in two scripts: hieroglyphic and demotic. The Stone helped modern scholars learn to translate Egyptian hieroglyphics. (The Bridgeman Art Library/Getty Images)

with a reed pen on papyrus was much faster and easier than carving them into stone. Over time, they began to connect hieroglyphs much in the manner of our own cursive script.

This more **utilitarian** writing was known as **hieratic**, and over the years it came to resemble the hieroglyphs less and less. Egyptians believed that the hieroglyphs were sacred and had magical powers, and continued to carve them on temples and tombs. For other purposes, however, the hieratic script was much easier and quicker. In about 700 B.C.E., scribes developed an even simpler form of writing called **demotic**, from a Greek word that means "of the people."

Initially, only a very few Egyptians could read and write, and to be a scribe in Egyptian society was a great honor. As the writing became simpler, however, many more people learned to read and write, making it more difficult for scribes to earn a living. Many scribes became authors, publishing works of fiction and poetry.

Hieroglyphs continued to be used in Egypt until about the fourth century C.E. They survived many foreign conquests and were regarded even by Greek and Roman rulers as sacred and magical. The language finally died out and was replaced by **Coptic**, an Egyptian language written in Greek characters. Today, Coptic is used only in rites of the Coptic

Ancient Egyptian writing included more than 2,000 glyphs, or individual signs. Most of the glyphs resembled people, animals, or everyday objects. Note the often-used scarab or dung beetle near the bottom of the middle panel. (Jochem D. Wijnands/Taxi/Getty Images)

church. In the seventh century C.E., Arabic replaced Coptic as Egypt's language. By the fourth century C.E., no one alive could read Egyptian hieroglyphs. It was not until the nineteenth century C.E. that the discovery of the Rosetta Stone allowed scholars to translate hieroglyphs.

Merötic

To the south of Egypt along the Nile River lay another great African civilization in the region called Nubia. The Egyptians called these people the Kush. After a military defeat by the Assyrians in about 600 B.C.E., the Kushites moved their capital south from Napata to the island of Meröe, located near the border of modern Egypt and Sudan. Although this civilization rivaled Egypt's, and Kushites even ruled Egypt for a period, scholars have paid much less attention to Nubia than to Egypt. One possible reason for the lack of attention is that the written language of Meröe, called Merötic, is indecipherable. Merötic uses a script that is similar to Egyptian hieroglyphs, but it differs from Egyptian writing in that it is always read from right to left. Unless something like a Rosetta Stone is found for Merötic, this ancient language may remain forever a mystery.

Ge'ez

One other great ancient African civilization developed a written language: the Axum. The Axum flourished in the fourth and fifth centuries C.E. in what is now Ethiopia, along the east coast of Africa. The Axumite language was influenced by the Sabeans, who emigrated from Yemen in southern Arabia during the first millennium B.C.E. The original script, *boustrophedon*, literally means "as the ox turns in plowing" and indicates that lines of script are read alternately left to right, then right to left.

TURNING POINT

The Invention of Papyrus

Between 3100 and 2300 B.C.E., the Egyptians invented a technique for turning the reed of a plant called *Cyperus papyrus* into paper through a complex process of soaking and pounding. Workers harvested papyrus reeds that were about 10 to 15 feet tall and stripped them of their tough outer layer, then sliced the yellowish core into thin strips. Afterwards, they soaked the broadest strips from the center of the plant, pounded them thin, and arranged them side by side, with each strip overlapping the next. Another layer of strips then was placed on top of the first layer at right angles. Workers pounded the resulting **papyrus** sheet again and then weighted it down with a stone slab to dry for about a week.

After the sheet had dried, papermakers polished it with a shell or piece of ivory. The edges of the sheet were trimmed and the ends glued together to form a scroll. Usually, Egyptian papyrus scrolls unrolled to between six inches (15 cm) and 12 inches (30 cm) wide and 50 feet (15 m) long, although longer rolls have also been discovered.

The invention of papyrus enabled Egyptian **scribes** to write much more quickly. This led to a simplified script, called **demotic**, which greatly increased the number of manuscripts they could create.

The Ge'ez system of writing used 24 symbols but, like Egyptian, did not use vowels. Vowels were added when the Axumites converted to Christianity, sometime during the fourth century C.E. The earliest known inscriptions in Ge'ez were written in the third century C.E. It has not been used as a spoken language since the tenth century C.E., but it is still the official language of the Ethiopian Orthodox Church.

LANGUAGE AND WRITING

CA. 3400–3100 B.C.E. Earliest known writing systems arise in Sumer and Egypt

CA. 3100–2900 B.C.E. Invention of papyrus

CA. 700 B.C.E. Egyptians evolve a simpler form of writing called *demotic*

C.E. 300 Last use of hieroglyphic writing; earliest known inscription written in Ge'ez, a language used in what is now Ethiopia

C.E. 400 Vowels are used in the Ge'ez language for the first time

C.E. 1000 Ge'ez language dies out except for religious use

C.E. 1799 Rosetta Stone found by Pierre Bouchard

C.E. 1822–1824. Rosetta Stone deciphered by Jean-François Champollion

C.E. 1998 Earliest Egyptian inscriptions, dating from ca. 3400 B.C.E. found in Abydos by archeologist Günter Dreyer

C.E. 2003 Egyptians demand the return of the Rosetta Stone from the British

WHAT WE CAN LEARN FROM ANCIENT LANGUAGES

Scholars who study the development of language can be thought of as archeologists of words. They study **cognates**, or words that are similar from one language to the next, to determine families of languages and to determine when certain words entered languages. For example, studies of African languages have allowed scholars to determine such things as when people first learned how to plant crops or work with metal. By comparing the word for "iron" in several African languages, for example, **linguists** can figure out which language coined the term, which in turn can lead to an

understanding of when the word was first used. As one language borrowed words from another, scholars can trace the history of contact among different peoples. Language, when studied along with physical **artifacts**, is a rich source of information about ancient civilizations.

See also: Axum; Egypt; Kush; Nubia.

FURTHER READING

Budge, E.A. Wallis. *Egyptian Language: Lessons in Egyptian Hieroglyphics*. Rev. ed. New York: Barnes and Noble, 1993.

Harris, Joseph E. *Africans and Their History*. Rev. ed. New York: Penguin, 1998.

Reader, John. *Africa: A Biography of the Continent*. New York: Knopf, 1998.

Solé, Robert, and Dominque Valbelle. *The Rosetta Stone: The Story of the Decoding of Hieroglyphics*. Translated by Steven Rendall. New York: Four Walls Eight Windows, 2002.

Warburton, Lois. *The Beginning of Writing*. San Diego: Lucent Books, 1990.

Libya

Term used by the ancient Greeks to refer to most of North Africa and the Berber tribespeople who inhabited the region. In ancient times, the name *Libya* referred to all of Northern Africa west of Egypt, including what are today the countries of Libya, Algeria, Tunisia, Morocco, and parts of Mauritania.

In the eighth millennium B.C.E., the people living in the coastal areas of North Africa knew how to domesticate animals and grow crops. In prehistoric times, the Sahara was a savannah that had plenty of rainfall, abundant game, and rich pastureland. The nomadic inhabitants of this area hunted wild game and herded domestic animals. Around 2000 B.C.E., however, the land began to dry up and become the desert it is today.

In about 3000 B.C.E., a group of people migrated to northern Africa, perhaps from southwestern Asia. They called themselves *imazighan*, which means "free people." Arab conquerors who came in C.E. 643 called them Berbers (meaning "not Arab"), which is how they are usually referred to today.

Ancient Libya consisted of three major regions: Tripolitania, Cyrenaica, and the Fezzan. Cyrenaica was located in the eastern portion of Libya, and Tripolitania to the west; the Fezzan were the desert regions to the south. The Phoenicians, an ancient civilization of the Middle East, colonized Tripolitania as early as the twelfth century B.C.E. By the fifth century B.C.E. the region was dominated by the great Phoenician city of Carthage in north Africa. Phoenician settlements along the coast included Oea (now known as Tripoli), Labdah (Leptis Magna), and Sabratah. This area became known as Tripolis, or "three cities," and later Tripolitania.

The ancient Greeks colonized Cyrenaica and founded the central city of Cyrene. The Greeks also founded Barce, Euesperides, Teuchira, and Apollonia. Together with Cyrene, these cities were known as the Pentapolis, or "five cities."

During the period of Phoenician and Greek colonization, the Fezzan was home to a people known as Garamantes, who held sway over a chain of oases and controlled the routes traveled by desert caravans from the interior of the region to the coasts. Horse breeders and cattle herders, the Garamantes also developed methods to irrigate their land using underground stone channels called *foggares*.

The Romans conquered Tripolitania and Cyrenaica in the second century B.C.E. While Rome never conquered the Fezzan, it did develop trade and military alliances with the local peoples in the first century C.E. Rome ruled Libya for more than 500 years, during which the region remained prosperous and at peace.

In C.E. 429, the Vandals, a Germanic tribe, crossed into Libya from Spain and made Carthage their capital. From there, they launched attacks on Italy, sacking Rome in 455. In 533, the Byzantine general Belisarius reconquered North Africa for the Roman Empire. The Arab general Amr ibn al-A'as conquered Cyrenaica in 642; two years later, he conquered Tripolitania, bringing the entire coastal region under Arab control. In 663, General Uqba bin Nafi invaded the Fezzan, consolidating Arab rule. Arab soldiers did not bring families with them; instead, they married indigenous women, thus bringing Arab culture to the native peoples.

Over the next several centuries, Libya was ruled by a number of Arab and Berber dynasties. The Berber Almohad dynasty conquered much of Spain and retained a presence there until 1492. In the sixteenth century C.E., Libya became a part of the Ottoman Empire.

See also: Berbers; Carthage; Greek Colonies; Religion.

FURTHER READING

Di Vita, Antonio, et al. *Libya: The Lost Cities of the Roman Empire*. New York: Konemann, 1999.

Vandewalle, Dirk. *A History of Modern Libya*. Cambridge: Cambridge University Press, 2006.

M

Makeda *See* Sheba, Queen of.

Mali

Ancient West African kingdom, located along the Niger River, from the Atlantic coast to the great bend of the river near Timbuktu. Mali flourished from the thirteenth to the fifteenth centuries C.E.

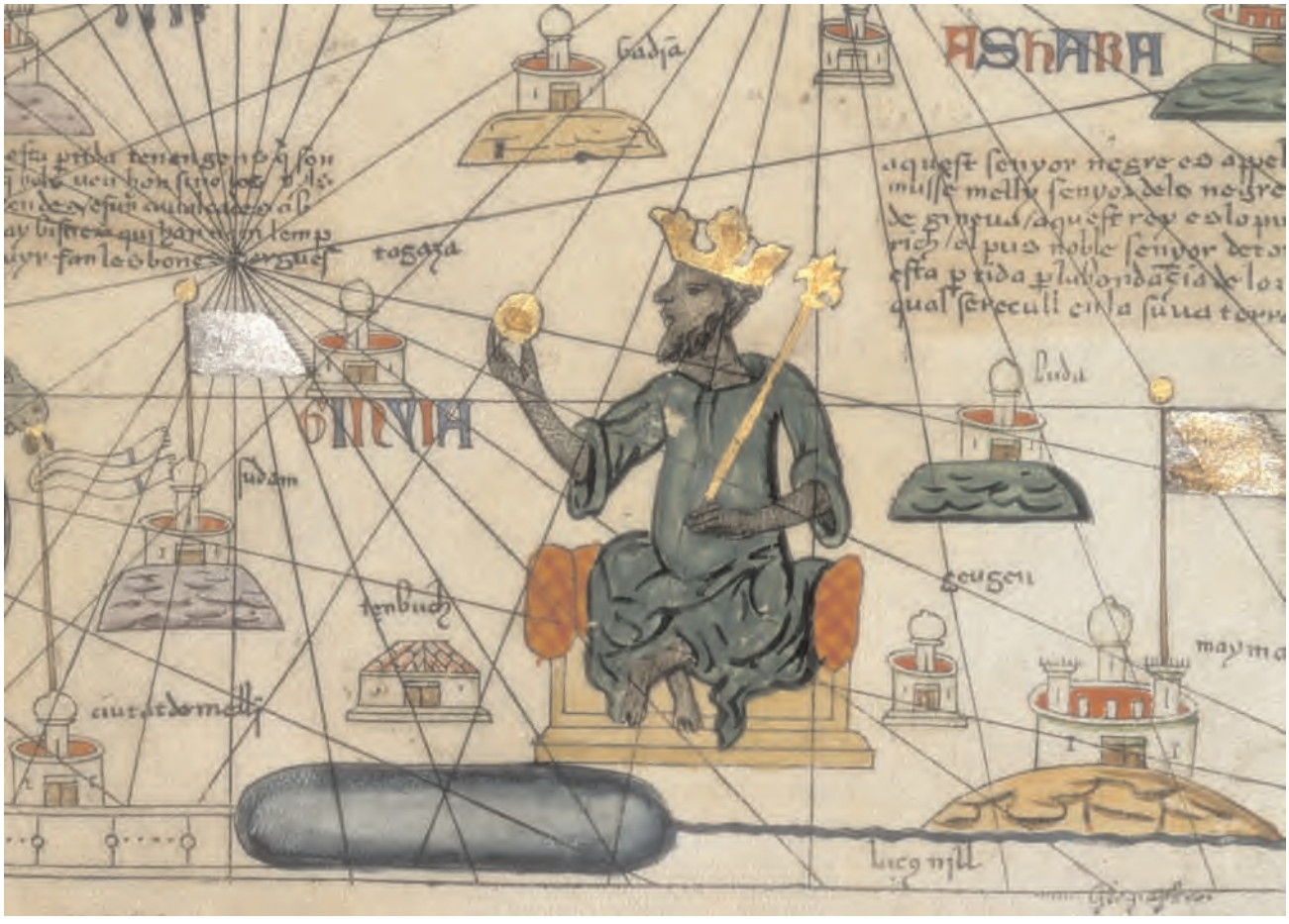
During the twelfth century C.E., the Sosso people of Guinea, led by their king, Sumanguru, took over some of the original territory of Ghana. Among those groups who came under Sumanguru's rule were the Mandinka, who lived in the small state of Mali, just south of Ghana.

According to the *Sundiata*, Mali's national epic, a young man of the same name was one of 12 sons of a Mandinka king. When Sumanguru came into power, he had most of the royal family killed, but he spared Sundiata (whose name means "the hungering lion") because he was frail and weak and could neither walk nor speak. Later, with the assistance of a blacksmith who made braces for his legs, Sundiata grew into a great magician and leader. In about 1240, according to the tale, Sundiata led a successful rebellion against Sumanguru, founding the empire of Mali. Sundiata ruled the Mali Empire until 1255.

The wealth of the Mali Empire was legendary. At the height of its power in the fourteenth century C.E., Mali was the source of more than half the world's gold. It controlled the entire trans-Saharan caravan trade in gold as well as salt. The annual flooding of the Niger Delta also provided Mali with extensive tracts of fertile land. The use of slave labor allowed Mali to grow surplus food, an important factor in holding the empire together.

Mali's greatest Mansa, or emperor, was Mansa Kankan Musa I, who ruled from 1312 to 1337. Musa was either Sundiata's grandson or grandnephew. He came to the throne after his predecessor, Abu Bakar II, gathered a fleet of ships and set off to cross the Atlantic Ocean never to return. According to Musa himself, Abu Bakar "got ready 2,000 ships, 1,000 for himself and the men whom he took with him, and 1,000 for water and provisions. He left me to deputize for him and embarked on the Atlantic Ocean with his men. That was the last we saw of him and those who were with him. And so I became king in my own right." Some scholars believe that some members of Abu Bakar's expedition might have made it across the Atlantic, because there is evidence of Mandinka language in Brazil.

Mansa Musa, a devout Muslim, is famous not only for the *hajj*, or pilgrimage, he took to Mecca in 1234—



This detail from a C.E. fourteenth-century Spanish map of North Africa depicts Mansa Musa, a king of ancient Mali, seated on a throne and holding a gold nugget, which is symbolic of his great wealth. (HIP/Art Resource, NY)

traveling an immense distance with a huge entourage—but also for expanding the Mali Empire to include the great cities of Timbuktu, Gao, and Djenné, all of which are located in the modern country of Mali. Mansa Musa doubled the size of the empire by bringing a number of smaller city-states under his rule. During the fourteenth century C.E., Mali was larger than Western Europe, stretching about 1,000 miles (1,600 km) from east to west. Mansa Musa is also remembered for his generosity in building great mosques, universities, and libraries. Under his rule, Mali became famous throughout the world for both its wealth and as a center of Islamic scholarship.

Mansa Musa died in 1337 and was succeeded by his son Maghan (r. 1337–1341). As it turned out, Mansa Musa's successors were ineffective and unable to keep the vast empire together. Several small kingdoms that had been conquered by earlier rulers began to break away. Eventually the kingdom of Songhai, which had once been ruled by Mali, took over the caravan routes and established an empire in the same geographical area. Songhai flourished from the fifteenth to the sixteenth centuries C.E.

See also: Ghana; Ibn Battuta; Salt Trade; Songhai Empire.

FURTHER READING

Conrad, David C. *Empires of Medieval West Africa: Ghana, Mali, and Songhay*. New York: Facts On File, 2005.

McKissack, Patricia, and Frederick McKissack. *The*

GREAT LIVES

Mansa Musa

Mansa Musa is famous not only for his contributions to the growth and stability of the Mali Empire and for his support of Islamic scholarship, but also for his pilgrimage to Mecca, perhaps one of the most spectacular caravans in history. When Musa left Timbuktu in C.E. 1324, his entourage included 60,000 servants, 14,000 of whom were slaves dressed in the finest brocades and Persian silks. His caravan included 80 camels, each carrying 300 pounds (136 kg) of gold dust. The troupe was preceded by 500 slaves, each carrying a solid gold staff weighing six pounds (2.7 kg). It is said that wherever he stopped on Fridays, the Muslim day of communal prayer, he donated money to build a mosque. Along the way he took a detour to Cairo, where he visited al-Malik an-Nasir, a great sultan. He gave away so much gold that he actually devalued the Egyptian currency for a period of time. Musa spent so much that it is said he had to borrow money for his return trip from Mecca.

While in Mecca, Musa met the architect of the great Moorish city in Granada, Spain, Abu-Ishaq Ibrahim-es-Saheli. Musa persuaded Ibrahim-es-Saheli to return with him to Mali and commissioned him to build the Malian royal palace and the Djinga-reyber Mosque in Timbuktu, as well as mosques in Djenné and Gao. Ibrahim-es-Saheli introduced a new building technique, the use of mud bricks, in the construction of these mosques.

Musa literally put Mali on the map. The story of his wealth and generosity traveled throughout the Muslim world and from there across Europe. Mali first appeared on European maps in 1349. On one map drawn in 1375, Musa is depicted on his throne holding up a nugget of gold.

Royal Kingdoms of Ghana, Mali, and Songhay. New York: Holt, 1995.

Thobhani, Akbarall. *Mansa Musa: Golden King of Ancient Mali*. Dubuque, IA: Kendall-Hunt, 1998.

Mansa Musa *See* Mali.

Mauretania

In North Africa, an ancient Berber kingdom in what is now Morocco and Algeria, which later became a Roman province. Berbers are an ethnic group that lived throughout northwestern Africa. Ancient Mauretania does not coincide with the modern country of Mauritania, which is located to the south and west of the ancient Roman province.

The first Roman colony in Africa, Africa Vetus, was built near the ruins of the Phoenician city of Carthage in North Africa. The Carthaginians were great enemies of the Roman Empire, and the two powers fought three wars, called the Punic Wars. When the Romans defeated the Carthaginians in the Third Punic War in 146 B.C.E, they established Africa Vetus. The rest of the territory that had been

under Carthaginian rule, called Numidia, remained in the hands of the Numidian king, Massinissa. Although Massinissa was under Roman domination, he was allowed a great deal of freedom. Upon his death in 148 B.C.E., however, the Roman rulers carved his territory into several smaller kingdoms.

Thirty years later, a Numidian prince, Jugurtha, tried to bring these smaller kingdoms back together under his rule. In the process, he attacked the Roman city of Cirta in Numidia and killed many Roman settlers, causing Rome to retaliate. Jugurtha was defeated and executed in 106 B.C.E., and the Romans installed his father-in-law, King Bocchus of Mauretania, to rule the lands that had been under Jurgurtha's control. This effectively brought all of North Africa under Roman rule.

In 49 B.C.E., Juba I, king of Numidia, now a Roman province just to the west of Mauretania, sided with Metellus Scipio against Julius Caesar in his quest for control of the Roman Empire. When Caesar defeated Scipio at the Battle of Thapsus in 46 B.C.E., Juba took his own life. Nevertheless, his son, Juba II, who had been educated in Rome, returned to Africa and was appointed king of Mauretania by Emperor Augustus, in about 25 B.C.E. Juba reigned for only two years and was succeeded by his son, Ptolemy I, who reigned until his murder at the orders of the emperor Caligula in 40 B.C.E. Ptolemy was the last king of Mauretania, which then became a Roman province.

During his reign from C.E. 41 to 54, the Roman Emperor Claudius divided Roman Africa into several provinces. He split Mauretania into Mauretania Tingitana (the area of present-day Morocco) and Mauretania Caesariensis (the area of present-day Algeria). The other provinces were Numidia and Africa Proconsularis, which included Africa Vetus.

The North African provinces, including Mauretania, were an important part of the Roman Empire. The region was known as the granary of the empire because it produced more than a million tons of grain each year. Mauretania also produced olives, marble, wine, timber, and livestock.

In the fifth century C.E., Germanic tribes known as Vandals overran Roman Africa, and Mauretania was destroyed.

See also: Berbers; Carthage; Libya.

FURTHER READING

Winks, Robin W., and Susan P. Mattern-Parkes. *The Ancient Mediterranean World: From the Stone Age to A.D. 600*. Oxford: Oxford University Press, 2004.

Monomutapa Empire (also Mutapa, Munhumutapa, Monomotapa)

An extended area in southeastern Africa that flourished during the fifteenth century C.E. Its territory stretched from the Zambezi River to the Limpopo River, and from the Kalahari Desert to the Indian Ocean. Today, this area comprises the countries of Zambia, Zimbabwe, and Mozambique, and the Transvaal region of South Africa.

In about C.E. 1420, a number of Shona kings declared independence from the Rozwi Clan of Great Zimbabwe. One of these kings, Mutota, conducted a major military campaign that won him a large and very rich territory and the title *Mwene Mutapa*, which means "master soldier" or "master pillager."

This title was passed down to his successors. (The term *Monomutapa* was coined by the Portuguese and is probably a corruption of Mwene Mutapa.) The people of Monomutapa believed that only their king could communicate with the spirits, giving him ultimate authority over all aspects of life. His power was enhanced by a royal fire that burned during the king's reign and was extinguished at his death, to be relit only when a successor took the throne. Subordinate rulers also carried fire as a symbol of unity, relighting their torches from the royal fire once a year.

The Monomutapa Empire greatly expanded existing caravan routes from the African interior to the Indian Ocean. Its rulers became rich by trading gold, copper, and ivory for Indian cloth, Chinese silk, and Persian pottery. The immense wealth of the Mutapa and his successors is underscored by the words of fifteenth-century C.E. Portuguese historian Jodo de Barros, who said of the king's palace, "The floors, ceiling, beams, and rafters are all either gilt or plated with gold."

Despite efforts to keep the huge empire united under one ruler, many forces combined to destroy Monomutapa, including interference by Portuguese explorers who wanted access to the region's wealth. By the early 1500s, the empire split, and a rival people, the Changamire, took over the southern portion. By the end of the century, much of the gold was panned out and trade in precious metals was replaced by the slave trade. Monomutapa was further weakened by internal disputes and rebellions. By the late 1600s, Monomutapa was conquered by the Portuguese.

See also: Great Zimbabwe; Slavery.

FURTHER READING

Harris, Joseph E. *Africans and Their History*. Rev. ed. New York: Penguin, 1998.

Myths and Epics

The myths told and cherished by ancient African peoples are sacred tales that attempt to explain how natural phenomena and humanity came to be. They also clarify the relationships among humans and their deities. Epics are long stories about great heroes and great deeds.

Many adherents of African traditional religions believe in their myths in same way that many Christians believe the stories of the Bible.

Like mythic figures, African epic heroes often embody those characteristics that are most valued by the particular culture. In some cases the events described in epics have a historical basis. For example, although greatly embellished with magical events, the African epic *Sundiata* is based on the life of a real king of Mali.

MYTHOLOGY

African mythology is as diverse as Africa itself, but there are certain themes that seem to repeat across the continent. Many myths describe the separation or emergence of land from water. The Egyptians believed that the world began as an ocean they called Nun or Nu. Ra, the sun god, appeared as an egg bobbing on the surface of the waters. He emerged and created four children, Shu, Geb, Tefnut, and Nut. Shu was the god of air, Tefnut the goddess of moisture; together they formed the atmosphere. Geb became the earth. Standing upon her, Shu and Tefnut raised up Nut, the sky.

Similarly, the Yoruba of Nigeria believe that in the beginning there was only water and sky. The Creator, Olorun or Oldumare, ruled the sky, and the goddess Olokun ruled below. A third deity, Obatala, asked Olorun for permission to create earth. Obatala

LINK TO PLACE

African and American Flood Myths

The story of the Great Flood in the Hebrew Bible is only one of many such stories told in cultures all over the world, some of which share similarities with the biblical version. A myth told by the Maasai of East Africa, for example, features Tumbainot (a righteous man), his two wives, and six sons. God decides to punish the rest of humankind, who are all sinners. He warns Tumbainot and tells him to build a wooden boat. When the rains cease, Tumbainot sends forth a dove, then a vulture, to determine if it is safe to disembark. As the family steps off the boat, they see four rainbows.

A similar story is told by the Ojibwa tribe of North America, though with some interesting variations. It begins, "There came a time when the harmonious way of life did not continue." The Creator, Gitchie Manido, decides to purify the earth by water. Waynaboozhoo, the spirit of the people, is saved by floating on a log. Animals who survived the flood join him on the raft. Rather than send a bird to search for dry land, Waynaboozhoo and his companions attempt to dive to the bottom to bring land to the surface. Many animals try but none can reach bottom except Muskrat, who loses his life in the process. Before he dies, Muskrat is able to make it back to the raft with a bit of earth in his paw. Waynaboozhoo places the earth on Turtle's back. The earth grows, and those who were saved dance on Turtle's back. Stories about animals diving and the land being placed on the back of a turtle are repeated in many Native American cultures.

There is almost infinite variety in the stories recounted by native peoples, but the image of a flood that purifies the earth and washes away sin is prominent in both African and Native American mythology.

pours sand from a snail's shell then drops a hen upon the sand, who scratches the sand and scatters it to form the earth.

The Boshongo, a Bantu-speaking group from Central Africa, believe that the creator Bumba had a stomachache, which led him to vomit up the sun. The sun dried the water, and the land emerged.

The Mandé-speaking people of Mali believe in a version of the "cosmic egg" myth. The creator, Mangala, plants the seeds of twins in a womb. One of the twins, Pemba, escapes from the egg, steals a portion of the placenta, and throws it down. This becomes earth.

Creation of Humankind

Many myths also recount how humans came to be. In the Mandé myth alluded to above, Mangala castrates and kills Pemba's brother, Farro, in order to try to save his creation from Pemba's interference. Mangala then resurrects Farro as the first human. In the Yoruba story of how humans came to be after Obatala creates the earth, Obatala decides to shape some companions from clay, but he drinks too much palm wine and creates some people with deformities. The next day he regrets his mistake and vows to protect his imperfect creations. He becomes the protector of all humankind, but he particularly cherishes those with disabilities. Several African myths tell not only how humans were created but also how different races came into being. A West African myth explains that two spirits came to live on earth. They were lonely and decided to make children from clay. They baked the children in fire, leaving some in the flames longer than others. Thus, people of different colors came to be. The Shilluks of the Sudan believe that the creator walked the earth making humans of clay. The people he created assumed the color of the clay from which they were formed—white in some places, red in others, and black in yet others.

Sin and Death

Many African myths tell of a fall from grace in which humans commit sin, become subject to mortality, and are banished to a fallen world. Like Eve in the Book of Genesis, a woman is often the original sinner. For example, the Akan people of Ghana tell the story of an old woman who drives the supreme being away by her incessant pounding of yams. A myth of the Kantana from central Nigeria tells of a woman who angers the supreme being by stealing fire. Also like the Hebrew Bible, African mythology is replete with myths about a flood that was sent by the supreme being as a punishment for sin.

Another frequent theme of myths everywhere is what happens after death. The Yoruba idea of the soul is similar to the Egyptian concept. Egyptians believed that the soul had three parts: the *ankh*, which is the characteristic of the soul that makes it immortal—the "breath" of the soul; the *ba*, which is the part of the soul that leaves the body after death; and the *ka*, or a person's double. Death was often referred to as joining one's ka. The Yoruba likewise believe that people are comprised of three spirits: *emi*, the life force; *ojiji*, which, like the ka, awaits the person after death; and the *ori*, or a guardian spirit.

Trickster Stories

Many African myths, including some creation myths, feature trickster figures. These are gods or spirits, often in animal form, that symbolize the human tendency toward mischief and jokes, as well as the desire to flout authority. Tricksters are sometimes portrayed as small animals who, through cunning, outwit much larger and stronger creatures. Among the most famous of these is Anansi the spider, whose stories are told by the Ashanti of West Africa. In one story, Anansi causes a fight between two friends by wearing a hat that is red on one side and white on the other. The friends argue about the hat's color until Anansi shows up to explain the trick. The only time Anansi was outsmarted was the time he got stuck to the legs of a girl made of wax; this story is the model for the Uncle Remus tale of the tar baby, a story popularized by the American writer Joel Chandler Harris in the late nineteenth century C.E.

EPICS

In sub-Saharan Africa, most people were not literate until the nineteenth century C.E.; thus, history, religion, and literature all had to be transmitted orally. To this day in many parts of the continent, storytellers, called *griots* in West Africa, are important figures who provide the cement that holds communities together by reciting the tales that help define the culture. These stories include folktales, proverbs, legends, and epics.

Epic tales tend to portray that which is regarded as most heroic and noble by the cultures in which they arise, often depicting battles between the forces of good and evil. Africa has many such epics, the most famous of which is *The Sundiata*, or *The Lion King*, the story of the first king of Mali (ca. C.E. 1210–1260). (The 1994 Disney movie and the Broadway show of the same name are based on a version of this epic.) The story is grounded to some extent on historical fact, but it also contains many magical elements.

In the tale, a Mandinka king, Naré Maghann Konaté, is told that he will have a son by an ugly woman, and that the son will become a great king. Thus, when Konaté meets a hunchbacked woman named Sogolon, he marries her. Sogolon gives birth to a son, Sundiata, who is so weak that he cannot walk until he is 10 years old. After his father's death, Sundiata and his mother are driven into exile by his father's first wife. She hates Sundiata because she fears the throne will go to him instead of to her own son. During his exile, Sundiata gains strength and becomes a mighty warrior. When Mali is attacked by the evil sorcerer Soumaoro Kanté, Sundiata returns to Mali and defeats Soumaoro in battle. He goes on to become Mali's greatest king.

The modern Senegalese griot Mamadou Kouyaté begins his telling of *Sundiata* with these words: "I teach kings the history of their ancestors so that the lives of the ancients might serve them as an example,

for the world is old, but the future springs from the past." Kouyaté's statement is a good summary of the function of the epic: to teach members of a culture the best, most heroic way to live.

A less well-known epic of the Nyanga people, who live in what is now the Democratic **Republic** of the Congo, is called *Mwindo*. Mwindo is the son of a great chief who told his wives that all of his children must be daughters so that he would not have to pay a bride price for his son to marry. His favorite wife, however, had a son, who, the minute he was born, leapt up, danced, and sang:

> I am Mwindo
> the one born walking,
> the one born talking.
> My father does not want me.
> But what can he do against me?

Like Sundiata, Mwindo leaves his village and grows up far away in the village of his aunt. Then Mwindo vows to fight his father for the kingship, but they are eventually reconciled. Along with many positive traits, Mwindo has many faults. He is boastful, arrogant, and at times ruthless. As he matures, however, he learns to be moderate, generous, and kind; that is, he comes to embody those virtues most admired in his culture.

In *The African Epic Controversy* (2002), M.M. Mulokozi notes that the heroes of African epics share several characteristics that differentiate them from heroes from other cultures. These include their use of magic to defeat enemies and their reliance on "group support." As Mulokozi explains it, "Heroes win because they enjoy the support of their communities or followers." In African society, kinship ties and a sense of community are crucial factors in maintaining the social order, so it is not surprising that its heroes are not loners like those so common in Western epics—who defy the wishes of the group.

See also: Culture and Traditions; Mali; Religion; Society.

FURTHER READING

Altman, Linda Jacobs. *African Mythology*. Berkeley Heights, NJ: Enslow, 2003.

Lynch, Patricia Ann. *African Mythology A to Z*. New York: Facts on File, 2004.

Scheub, Harold. *A Dictionary of African Mythology: The Mythmaker as Storyteller*. Oxford: Oxford University Press, 2002.

Nile River

River in northeastern Africa that flows north from Lake Victoria through Sudan, Ethiopia, and Egypt, leading to the Mediterranean Sea. At 4,160 miles (6,700 km) long the Nile is the longest river in the world. The Nile Valley was the site of the earliest civilization in Africa—that of Egypt—as well as other notable ancient kingdoms such as Nubia.

The importance of the Nile River to ancient African civilizations, and especially to the Egyptians, cannot be overstated. Each year the Nile overflows its banks and, when the water recedes, the sediment it deposits leaves a rich soil for growing crops. This annual inundation makes the Nile Valley an ideal environment for the kind of intensive agriculture needed to support a large population.

A river usually floods because of heavy rains or the melting of winter snows in the mountains from which the river arises. However, the Nile inundation occurs without rainfall in the immediate area. Instead, it is caused by heavy rainfall to the south in the Ethiopian highlands. When the rains fall on the Ethiopian plateau in the summer, the runoff creates flooding hundreds of miles downriver during the months of June through September.

Surrounded as it is by desert on both sides, the Nile must have seemed a sacred oasis to the ancient Egyptians, with the flooding coming as a gift from the gods. Although the Egyptians associated the Nile, which they called the Iteru, with life and fertility, they did not worship the river as a god. Rather, they worshipped the god Hapi, who personified the flooding itself.

Around 5000 B.C.E., the people who came to be known as the Egyptians began to settle on the shores of the Nile. By 3100 B.C.E., Egyptian rulers had unified the peoples living along the banks of the river into the world's first true nation state. Many of the advances associated with Egyptian civilization—the development of **hieroglyphics**, irrigation techniques, canal building, agricultural advances, even government **bureaucracy**—had to do with managing the annual inundation of the river to ensure adequate food for everyone.

Of course, the Nile provided more than good soil on which to grow crops; the ancient Egyptians ate fish from the river and hunted waterfowl. They harvested the **papyrus** that grew on the riverbanks to make paper, writing instruments, furniture, and boats. They also used the river for transportation. The ease of travel up and down the long watercourse helped to unify the peoples living on its banks into one nation. The Egyptians also used the river for elaborate funeral processions and to transport the stone with which they built their pyramids, temples, and towns. The river helped the growth of trade, and the delta provided protection from invaders who might want to attack Egypt from the Mediterranean.

LINK TO PLACE

Searching for the Source of the Nile

The Greek geographer Ptolemy said, in C.E. 150, that the source of the Nile River was in central Africa, in two lakes flanked by the "mountains of the moon." From that time until the middle of the nineteenth century C.E., nothing more was known about the source of this great river. Its mystery was protected by swampland, the threat of malaria and other tropical diseases, and fierce native inhabitants who were not particularly hospitable to visitors.

In 1856, England's Royal Geographical Society decided to finance an expedition to find the source of the Nile. They selected Sir Richard Burton to head the group, and he selected John Speke to accompany him. Both men had military experience, both had undertaken adventurous trips before, and Burton was an extraordinary **linguist**.

In 1857, the expedition left Bombay, India, and landed at Zanzibar on the east coast of Africa. The two men, along with 36 porters, 10 slaves, four drivers, and a group of Iranian soldiers, departed for the interior. The trip became a horrible ordeal; Burton and Speke were overcome with fever, supplies were wasted and stolen, and many members of the group deserted. By the time the expedition reached Lake Tanganyika, Burton wanted to turn back. Speke, however, continued northward with a small group and discovered Lake Victoria on August 3, 1858. On their return to England, Speke took credit for discovering the source of the Nile. In 2006, however, three explorers, using a Global Positioning System (GPS), traced the Nile to what they believe is its actual source in Rwanda—making the river more than 100 miles (167 km) longer than once was thought.

Another great culture—that of Nubia, just to the south of Egypt—also grew up along the Nile River. Although the banks of the Nile are more narrow to the south, making farming much more difficult, Nubia was rich in gold, ivory, and ebony.

See also: Agriculture; Egypt; Language and Writing; Nubia; Religion; Technology and Inventions.

FURTHER READING

Bangs, Richard, and Pasquale Scaturro. *Mystery of the Nile: The Epic Story of the First Descent of the World's Deadliest River*. New York: Putnam, 2005.

Collins, Robert O. *The Nile*. New Haven, CT: Yale University Press, 2002.

Nok People

A people who lived on the Jos Plateau in ancient southeastern Nigeria from about 500 B.C.E. to C.E 500. The Nok, who are admired primarily for their fine terra-cotta sculptures, appear to have been the first organized society in sub-Saharan Africa.

The name "Nok" comes from the town in Nigeria where the first **artifacts** of the culture—pottery shards—were found in C.E. 1943. Unfortunately, no **archeologists** were present at the initial find to preserve the evidence, so it was impossible to date the pottery with any degree of accuracy. Later discoveries at Taruga and Samun Dukiya in Nigeria, however, allowed scholars to date the pottery using

Although the Nok people are primarily known for their huge terra-cotta head sculptures, they also crafted seated figures such as this one, which probably originated near the ancient city of Katsina Ala, in central Nigeria. (Erich Lessing/Art Resource, NY)

thermoluminescence and **radio-carbon dating**. The majority of pieces were from the period 500 to 200 B.C.E., making them the oldest sculptures ever discovered south of the Sahara Desert.

Little is known about the Nok because they left no written records. There is evidence, however, that they planted crops and smelted iron, in addition to making the clay sculptures for which they are most famous. The sculptures indicate that the Nok adorned themselves with beads, nose rings, and bracelets made of stone and tin.

The terra-cotta sculptures are evidence that the Nok were extraordinarily sophisticated artists and **artisans**. The very fact that the pottery has survived for thousands of years is testament to the quality of the workmanship. Although the smooth surfaces have long since worn off, so that the sculptures are now pocked and coarsely grained, and most of the figures are missing parts, the pottery must have been well made to have endured so long.

The sculptures were constructed by coiling the clay, leaving a hollow center. Once the clay was coiled, the Nok carved the figure rather than sculpting it, suggesting that they may have originally perfected the technique in wood.

While some of the figures are small, many are life-sized. Though the faces are stylized and share many common characteristics, they are nevertheless clearly individualized. Unlike many other cultures, the Nok made figures of people who were ill with such diseases as elephantiasis, a disease characterized by gross enlargement of the limbs.

All of the figures share several common characteristics. The eyes are similar, often triangular or semicircular, and the eyebrows are wide, balancing the width of the lips. The figures' pupils, ears, noses, and mouths are pierced through, as by a reed. The hairstyles and costumes are extremely elaborate, and the figures are adorned with beads around their necks and waists. Finally, though elongated, the faces are realistic and individualized. Although scholars have no way of knowing how the figures were used, many speculate that the Nok were ancestor worshipers and that the figures represented ancestors and deities.

It is unclear what happened to the Nok people after C.E. 500, but some scholars note similarities between their terra-cotta sculptures and later Yoruba art. This has led to speculation that the Yoruba are the modern descendents of the Nok.

See also: Archeological Discoveries; Art and Architecture.

FURTHER READING

Africa's Glorious Legacy. Alexandria, VA: Time-Life Books, 1994.

DeGrunne, Bernard. *The Birth of Art in Africa: Nok Statuary in Nigeria*. New York: Vilo International, 1999.

Fagg, Bernard. *Nok Terracottas*. London: Ethnographia Books, 2000.

Phillipson, David W. *African Archeology*. Cambridge: Cambridge University Press, 1985.

Nubia

Kingdom lying to the south of ancient Egypt, an area that extends more than 700 miles (1,126 km) from the first cataract of the Nile River, near present-day Aswan, to the sixth cataract, near modern Khartoum.

The name *Nubia* is confusing because it is a relatively late term that was never used to describe the region during the time that the ancient kingdom existed. It may have derived from a people called Nobades, nomads who occupied lands along the Nile, and was probably not used until the Middle Ages. Today, *Nubian* may refer to those who speak dialects of the Nubian language or even to all of black Africa.

The earliest Egyptians called Nubia *Ta-Seti*, meaning "land of the bow," in reference to the Nubians' expertise with the bow and arrow. Beginning around 2000 B.C.E., Egyptians began to call the region Kush (sometimes spelled Cush, Kas, or Kos). When Kush is mentioned in Egyptian texts, the name is usually paired with the words for "vile" or "bad," indicating the Egyptian attitude toward a people who were sometimes their enemies, sometimes trading partners, and sometimes vassals. The term *Kush* also refers to a kingdom that arose in Nubia in 1700 B.C.E. and existed through various phases until C.E. 350.

A, B, AND C GROUP CULTURES

People have lived in the region known as Nubia for thousands of years. By 3500 B.C.E., two related cultures lived in Nubia: one in Upper Nubia (the southern area of the region); the other in Lower Nubia (the northern area). The A- and B-group people, known only as A-group by **archeologists**, left no written record. What is known about them comes from **excavation** of gravesites. Interestingly, many Egyptian **artifacts** can be found among the tombs, indicating that the two cultures had contact from as early as 5000 B.C.E. The A-group probably served as a trading link between Egypt and the lands to the south. Between 3500 and 3100 B.C.E., Egyptians attacked Nubia repeatedly; after 3100 B.C.E., there is no further trace of the A-group.

A new culture emerged in upper Nubia around 2300 B.C.E. Again, because this culture left no written record, archeologists do not know what the people of the region called themselves. This people, referred to by archeologists as C-group, left behind cemeteries filled with low, round tombs.

EGYPTIAN CONQUEST

Egypt conquered lower Nubia in about 1950 B.C.E. and remained in control until about 1700 B.C.E. Meanwhile, a people centered in the city of Kerma in upper Nubia, known as Kushites, grew in power. When Egypt withdrew from Nubia during the period of Hyksos rule (1700–1600 B.C.E.), Kushites solidified their hold on both upper and lower Nubia. The region was then conquered again, however, and came under Egyptian control from 1550 to 1100 B.C.E. Kushites adopted Egyptian religion, culture, and language and served in the Egyptian military.

KUSHITE KINGDOM

Not much is known about Nubian history during the period from about 1100 B.C.E. to the emergence of a new Kushite kingdom around 750 B.C.E. This realm was centered in Napata, a city south of Kerma. The

RISE OF NUBIA

3500–3100 B.C.E. "A-group" people occupy Nubia; earliest known inhabitants

2300–1550 B.C.E. "C-group" people occupy Nubia and build low, round tombs

CA. 2000 B.C.E. Egyptians begin to refer to the region as "Kush"

1950–1100 B.C.E. Egypt dominates Nubia

747–200 B.C.E. New Kushite kingdom emerges with Napata as its capital

712–765 B.C.E. Kushite kings found Egypt's Twenty-fifth Dynasty

CA. 650 B.C.E Kushites forced out of Egypt, settle in Nubia

200 B.C.E.–C.E. 350 Kushites establish kingdom in Nubia with its capital in Meröe

C.E. 350 Collapse of the Kushite kingdom

C.E. 527–565 Nubia converts to Christianity under the rule of the emperor Justinian

CA. C.E. 1300 Most Nubians are converted to Islam

C.E. 1913–1924 American Egyptologist George Reisner excavates sites in Nubia

C.E. 1942 University of Chicago professors Keith Seele and Georg Steindorff publish a history of Egypt that acknowledges Nubians were black

Kushite kings of this **era** eventually conquered Egypt and founded its Twenty-fifth Dynasty (712–657 B.C.E.).

Driven out of Egypt in 650 B.C.E., the Kushites retreated into Nubia and eventually made the city of Meröe their capital in about 200 B.C.E. Meröe, a great city and the heart of a thriving African civilization, was influenced by Egypt but deeply rooted in black African culture. The city endured until about C.E. 350, when it was captured and destroyed by an Axumite army from Ethiopia.

LATER YEARS

After the collapse of the Kushite kingdom, a group known as the Nobades established a state in upper Nubia, while another people, the Blemmyes (Bedja), established themselves in lower Nubia. The Nobades, like the Kushites, were profoundly influenced by Egyptian religion, art, and culture. The Blemmyes also worshipped Egyptian deities, but adopted Greek imperial titles for their rulers.

The people of Nubia were converted to Christianity during the reign of the Roman emperor Justinian (C.E. 527–565). The Christian identity of the region was threatened by the spread of Islam throughout northern and eastern Africa in the mid-seventh century C.E., but the Nubians resisted conversion for centuries. They made treaties with Arab rulers in Egypt and coexisted peacefully with their Islamic rulers. By the fourteenth century C.E., however, most Nubians had converted to Islam as part of a gradual and peaceful process that was facilitated by intermarriage between Nubians and Arab traders and merchants.

While archeologists have long studied Egyptian culture, Nubian culture had been largely ignored until the early twentieth century C.E. The first archeologists who engaged in **historical inquiry** of the region assumed, as they had with the massive stone ruins of Great Zimbabwe, that the magnificent temples and tombs of Nubia could not have been constructed by black Africans. The American Egyptologist George Reisner, for example, excavated many major Nubian sites between 1913 and 1924 and established a solid basis for understanding Nubian culture, but he insisted that black Africans could not have built the monuments. He also denied that pharaohs of the Twenty-fifth Egyptian Dynasty, who were Nubian, were African.

In 1942, University of Chicago scholars Keith Seele and Georg Steindorff published a history of

Egypt that acknowledged that the Nubians were black, but suggested that this dynasty marked a low point in Egyptian history. It was not until the 1970s that the true nature of the Nubian accomplishment, which parallels that of Egypt, was recognized and celebrated.

See also: Archeological Discoveries; Egypt; Great Zimbabwe; Kush; Nile River; Religion.

FURTHER READING

O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University of Pennsylvania Press, 1994.

Rosellini, Ippolito. *The Monuments of Egypt and Nubia*. Cairo, Egypt: American University in Cairo Press, 2003.

Shinnie, Peter L. *Ancient Nubia*. London: Kegan Paul, 1996.

Olduvai Gorge (also Oldupai)

A part of the Great Rift Valley in present-day northern Tanzania, and one of the most important sites for the archeological study of the evolution of human beings. The gorge is sometimes called the "cradle of humankind" because it contains large quantities of fossilized remains from the earliest known period of human evolution, and it well may be the place where *Homo sapiens* first evolved from humanoid ancestors.

Located on the Serengeti Plain, the gorge is nearly 30 miles (48 km) long and about 300 feet (90 m) deep. Olduvai was once a large lake whose shores were periodically covered with volcanic ash, resulting in ideal conditions for preserving human and animal remains. About a million and a half years ago, seismic activity caused the lake to drain. Then, about a half a million years ago, an earthquake diverted a stream that began to shape the dry lakebed into a gorge. The resulting geological formation revealed seven distinct layers of sediment, the lowest of which dates back about 2.5 million years.

Archeologists have studied the fossilized remains at Olduvai since a German entomologist, Professor Wilhelm Kattwinkel, arrived there in C.E. 1911. The most significant discoveries have been made by the Leakey family: Louis, his wife Mary, and their sons Richard and Jonathan.

Mary Leakey is credited with one of the most important finds in and around Olduvai. In 1959, while Louis was ill with the flu, Mary came upon a skull that turned out to be the first of its kind ever found, a humanlike creature that lived more than 1.75 million years ago. The Leakeys dubbed the fossil *Zinjanthropus*, and nicknamed it "nutcracker man" for the huge grinding molars that must have been used to eat a diet of coarse vegetation. *Zinjanthropus* has since been reclassified as a relative of *Australopithecus*, an extinct humanlike creature that had a small brain and walked on two legs, and is now called *Australopithecus boise*.

In 1960, the Leakey's eldest son, Jonathan, stumbled upon another skull that turned out to be the first example of *Homo habilis*, or "handy man." *Homo habilis* is older than *Zinjanthropus* and may have been the first humanlike creature to use tools. The Leakeys also discovered a stone circle that may have been the foundation of a hut made of branches. It is the earliest known human-made structure, dating back 1.8 million years.

In addition to human fossils, Olduvai has yielded evidence of more than 150 species of extinct animals, including prehistoric elephants, huge ostriches, giant horned sheep, and many birds, fish, and reptiles. Still revealing rich fossil finds, Olduvai Gorge is today visited by 450,000 tourists each year and is the site of a small museum that recounts the history of the archeological discoveries made there.

See also: Archeological Discoveries; Paleobiology.

FURTHER READING

Leakey, Mary D. *Olduvai Gorge: My Search for Early Man*. New York: Collins, 1979.

Morell, Virginia. *Ancestral Passions: The Leakey Family and the Quest for Humankind's Beginnings*. New York: Touchstone, 1996.

Sept, Jeanne. *Olduvai: Archaeology of Human Origins*. Bloomington: Indiana University Press, 1997.

Paleobiology

Literally, the study of ancient life. Paleobiologists study the fossilized remains of living creatures, including **artifacts** as large as dinosaur bones and as small as microscopic bacteria.

Many of the world's most significant paleobiological finds have been uncovered in Africa, particularly East Africa. While nineteenth-century C.E. scientists focused their attention on Europe and Asia, believing that life originated there, it has become clear since that time that Africa is the actual "cradle of humanity," the place where human life began.

One of the most significant finds occurred in Hadar, Ethiopia, in 1974 when **archeologists** Donald Johanson and Tom Gray came upon the fossilized remains of a female hominid, or humanlike, creature. They classified her as *Australopithecus afarensis* and named her Lucy. She was about 25 years old, stood three feet, eight inches (1.34 m) tall, and was bipedal (walked on two legs). Most remarkably, Lucy lived an estimated 3.2 million years ago, making her the oldest-known member of the human family tree at the time.

In 1976, at Laetoli, an archeological site in Tanzania, members of an expedition led by the paleontologist Mary Leakey found fossilized footprints of an upright hominid that were eventually dated at 3.6 million years old. Until this discovery, the oldest-known hominid footprints were just tens of thousands of years old. The side-by-side prints extended for about 80 feet (24 m) and then disappeared. One set of prints was larger than the other, suggesting a mother and child. An amazing set of coincidences preserved the trail. Ash from a volcanic eruption covered the land, and then rainfall turned the ash into a substance very much like cement. When the pair walked, their steps remained imprinted on the surface, eventually turning to stone.

Another major site in East Africa, explored for many years by members of the Leakey family, is Olduvai Gorge in the Great Rift Valley in Tanzania. There the Leakeys have discovered tools and fossils that date from three million years ago. These include the skull of *Homo habilis*, or "handy man," the first known species of the genus *Homo*, dating from 2.5 to 1.8 million years ago.

In December 1998, the oldest complete hominid skeleton was discovered in the Sterkfontein caves near Johannesburg, South Africa. This skeleton has been dated at between 3.2 and 3.5 million years old. Before this discovery, the oldest complete skeleton was that of a *Homo erectus* found in Kenya and dated at 1.5 million years.

Paleobiologists, anthropological geneticists, and others who search for clues to the evolution of *Homo sapiens* believe that the great savannahs of Africa, the temperate grasslands that stretched for

thousands of miles and were home to wildlife of all kinds, formed the ideal environment for the emergence of humankind. Many recent archeological discoveries seem to substantiate that belief.

See also: Archeological Discoveries; Olduvai Gorge.

FURTHER READING

Leakey, Mary D. *Olduvai Gorge: My Search for Early Man*. New York: Collins, 1979.

Schwartz, Jeffrey H., and Ian Tattersall. *The Human Fossil Record*. Vol. 1, *Craniomorphology of Genus* Homo *(Africa and Asia)*. Hoboken, NJ: Wiley-Liss, 2003.

Phoenicians

See Carthage.

Ptolemy

See Alexandria.

Punic Wars

See Carthage.

Pyramids

See Art and Architecture.

Queen of Sheba

See Sheba, Queen of.

Religion

Ancient Africans held strong beliefs concerning the nature of the supernatural or sacred, the meaning of human existence, and proper moral conduct and values. Scholars know much about ancient Egyptian religion and about the rise of Christianity and Islam in Africa because these faiths left ample written records.

Conversely, traditional African religions left no written records because most of the cultures in which they were practiced were not literate. In order to study the beliefs of these peoples, scholars must rely on oral information that has been handed down from generation to generation. Studies of those who practice traditional African religions today also offer important insights into their ancient counterparts.

MAJOR RELIGIONS AND BELIEFS

All religions can be classified as either **monotheistic** or **polytheistic**. Monotheistic religions, such as Islam and Christianity, are based on belief in a single supreme being; those who practice polytheistic religions worship multiple deities. Most traditional African religions, including the religions of Egypt and Nubia, were polytheistic.

Religions of Egypt and Nubia

Most of what is known today about the ancient Egyptians relates in one way or another to their religious beliefs, especially those having to do with life after death. The elaborate process of mummification and the construction of pyramids, for example, both derived from the Egyptian notions of the afterlife. They believed that the body was necessary for the afterlife and did what they could to preserve it intact, including mummifying it and sealing it in a tomb.

Egyptians believed in four key concepts—*Ma'at*, *ankh*, *ba*, and *ka*—along with a number of gods. Ma'at was the idea of justice and order. Symbolized by a feather, Ma'at was placed on a scale as a counterbalance to the heart of a dead person. If the heart was heavier than the feather, it was thought to be weighted down by evil. The evil heart was devoured by the god Ammit, consigning the evildoer to an eternity of nothingness. Persons with good hearts, however, joined the god Osiris in the afterlife.

The ankh was the Egyptian symbol of everlasting life, depicted as a cross in which the top vertical arm forms a loop. This symbol appears throughout Egyptian tombs, often held in the hands of the gods to demonstrate their power over life and death. The ankh was believed to be one of three parts of the human soul. The second part is the *ba*, represented by a bird. Ba is the totality of immortal forces in a

This painting, from the tomb of Sennedjem and his wife, shows the pair facing a court of the gods, which is comprised of a dozen Egyptian deities who will decide the fate of the couple. (The Bridgeman Art Library/Getty Images)

person. The third part of the soul is the *ka*, which is more difficult to define. It is depicted as a twin or double, and death is referred to as joining one's ka.

The Egyptians practiced mummification because they believed that the body and all elements of the soul had to be preserved in order for the deceased to survive in the afterlife. Various **artifacts** found in elaborate tombs, including clothing, perfume, jewelry, statues of servants, even boats and artificial limbs, were left in the expectation that the items would be used in the afterlife. Sculptures, paintings, and **inscriptions** on the tomb walls depicted everyday life, which in turn suggested that these scenes of happiness might continue for eternity.

The major Egyptian gods changed over the centuries and in some cases merged, a process known as syncretism, in which the characteristics of two gods would combine to form a new deity. The most significant example in the Egyptian **pantheon** was Amen-Ra. Amen (also Amun, Amon) was associated with holiness, and his name means "hidden." He was originally a god of Thebes and was often represented as a ram. Later he became associated with the sun god Ra (or Re). Combined, the two gods were regarded as the creator and father of all gods.

The pharaoh played a central role in Egyptian religion. He was the chief priest, the most important mediator between the people and the gods, and the son of the god Ra. It was the pharaoh who guaranteed the orderly progression of the seasons, the annual inundation of the Nile River, and the safety of his people. Thus, the pyramids were not only tombs but also religious monuments. They were built both to honor the pharaohs and to ensure the transition of the king to the afterlife. Ian Shaw, in *The Oxford History of Egypt* (2000), claims that the reasons behind the construction of these magnificent edifices are not mysterious. "It was . . . in everybody's interests to safeguard the king's position and status after his death as much as in his lifetime."

The kingdom to the south of Egypt, Nubia or Kush, was deeply influenced by Egyptian religions and honored many of the same gods. Nubian kings ruled Egypt during the Twenty-fifth Dynasty (712–765 B.C.E.), but afterward they retreated from

their capital at Napata to a new capital farther south at Meröe. Here, their religion continued to evolve without direct influence from Egypt. Among the Nubians, the traditional African lion god of war, Apedemak, became more popular than Amen. He was depicted sometimes as a lion but most often as a person with a lion's head.

Islam and Christianity

Christianity reached Egypt and the Roman provinces of North Africa soon after the death of Jesus of Nazareth, around C.E. 30. Egypt became a center for the study and dissemination of Christian theology and philosophy. However, the Roman rulers of Egypt did not readily accept this new religion. In 284, the emperor Diocletian executed so many Christians that the Coptic Church dates its calendar from that date in order to memorialize the martyrdom.

In the fourth century C.E., Christianity reached Axum, now known as Ethiopia. The faith took hold in Ethiopia thanks to a young Christian named Frumentius who served as an advisor to the youthful King Ezanus, who converted to Christianity as soon as he was old enough to rule on his own. Since that time, Ethiopia has been home to a large number of Coptic Christians. A mysterious group of Ethiopian Jews, who refer to themselves as Beta Israel, live alongside their Christian neighbors but are often subject to persecution.

Although Christianity flourished in parts of Africa, Islam was much more successful in finding converts. This process began not long after the death of the prophet Muhammad in C.E. 632. The continent's earliest Islamic converts lived along the northern coast of Africa in the area now occupied by Egypt, Liberia, Algeria, and Morocco. Later, Arab

LINK TO PLACE

Ethiopian Jews

Although the Jewish people are not often associated with Africa, from the ninth to the seventeenth centuries C.E., a black Jewish community in Ethiopia numbered a half million souls. Referred to by Christians as *Falasha*, meaning "aliens" or "exiles," Africa's black Jews called themselves Beta Israel, or House of Israel. Other Jews around the world were largely unaware of their existence until the twentieth century C.E.

The origins of this community are unknown, but several legends attempt to account for them. The Ethiopian national epic, or *Kebra Negast*, claims that the members of Beta Israel are descended directly from King Solomon of Israel and Makeda, the Queen of Sheba. According to this account, Makeda visited Solomon in Israel and returned to Ethiopia pregnant with his son. Another story suggests that Ethiopian Jews are the descendants of the tribe of Dan, which left Israel in order to avoid civil war. Both of these stories place the origin of Beta Israel around the ninth century B.C.E.

Subject to persecution and military attack beginning in the thirteenth century C.E., Beta Israel suffered a devastating defeat at the hands of Ethiopian Christians backed by Portuguese allies in 1624. Many thousands were killed, and others were enslaved. Those who remained were not allowed to own land. In 1736, a Scottish explorer, James Bruce, encountered Beta Israel while on an expedition to find the source of the Nile. At that time, he estimated their number at only about 10,000.

After the founding of the modern state of Israel in 1948, many attempts were made to help Ethiopian Jews emigrate to Israel. As a result of efforts conducted between 1977 and 1999, more than 70,000 found their way to the Jewish homeland. By 1999, although there were more than 70,000 Ethiopian Jews living in Israel, another 18,000 were believed to remain in Ethiopia, living under conditions of extreme poverty and persecution.

traders traveling the caravan routes through the Sahara Desert brought their religion with them to West Africa and to the interior of the continent—to Mali and the Sudan. They intermarried with native populations and began a gradual process of conversion.

Islam tended to be more popular with Africans than Christianity because it allowed more than one wife, a practice that was in keeping with traditional African customs. Although Islam is monotheistic, it recognizes jinn, invisible spiritual beings. Many African converts felt that these spirits were similar to the nature spirits and ancestral spirits of their traditional religions.

MINOR RELIGIONS AND BELIEFS

Traditional African religions, because they tend to be practiced by clans and **tribal** groups, have never had the large numbers of adherents claimed by traditional religions. They nevertheless have had a major influence on African history and culture.

Different as each one is from the other, there are certain characteristics that traditional African religions have in common. One basic similarity is that each provides rules for everyday living, including taboos (forbidden behavior). Most of these rules reflect values that are considered central to harmonious life in small, closely knit communities and are similar to ethical systems the world over: one must not steal, lie, or murder; one must revere parents and elders and provide hospitality to those in need.

Other rules are more particular and may seem odd or unusual. For example, in some groups, menstruating women must not appear in public; some clans have totem animals or plants that may not be eaten. A Baganda clan of what is now Uganda whose name means "mushroom" (Butiko) may not eat a certain kind of mushroom.

Another common characteristic of African traditional religions is animism, the belief that all things are inhabited by a spirit and that spirits are part of the everyday world. Thus, for example, among the Pygmies, a tribe that lived throughout equatorial Africa, hunters may leave gifts for the spirits or gods of the forest in order to ensure a successful hunt.

More important to African religions are the spirits of the ancestors. Although this practice often is mistakenly called "ancestor worship," it does not involve treating ancestors as gods or deities. For practitioners of traditional religions, the spirits of ancestors are directly present and still part of the community. They are consulted in daily decisions, and community members often leave gifts and food for them at small shrines containing **effigies** of the ancestors. Among the Akan of Ghana, for example, the stool of a king is blackened upon his death and installed in a shrine with those of others of his lineage.

Although most traditional African religions are polytheistic, most also feature belief in a supreme being who created the world but then withdrew because of evildoing by humans. Few traditional religions actually worship a creator; shrines and sacrifices typically are dedicated to lesser deities and ancestral spirits.

The status of the king in traditional African religions is similar to that of the pharaoh in Egyptian religion. That is, the king is regarded as having mystical powers to intercede with the gods and is considered the descendent or incarnation of deities. This is true among the religions of other sub-Saharan peoples such as the Ashanti and the Yoruba of West Africa, and the Lovedu of South Africa.

Rituals are also a central feature of traditional religions, including initiation rituals, naming rituals, harvest celebrations, and marriage rituals. These are methods by which people merge the everyday world with that of spirits. Initiation rituals are especially important in that they teach young men (and sometimes young women) how to be adults within the community, an event that includes instruction in religion.

INFLUENCES TODAY

Today, only about 20 percent of Africans practice traditional religions. The majority religion is Islam, but Christianity is growing rapidly. The growth of Christianity in twentieth century C.E. has been called "the fourth great age of Christian expansion." Before long, scholars estimate, one of every five Christians in the world will reside in Africa.

See also: Alexandria; Animism; Axum; Culture and Traditions; Egypt; Ghana; Kush; Sheba, Queen of; Society.

FURTHER READING

Magesa, Laurenti. *African Religions: The Moral Traditions of Abundant Life*. Maryknoll, NY: Orbis, 1997.

Mbityi, John S. *African Religions and Philosophy*. Portsmouth, NH: Heinemann, 1992.

Nesse, Randolph. "The Evolution of Commitment and the Origins of Religion." *Science and Spirit* 10, no. 2 (August 1999): 32–33, 46.

Ray, Benjamin C. *African Religions: Symbol, Ritual, and Community*. New York: Prentice Hall, 1999.

Rome

See Carthage.

Rosetta Stone

See Language and Writing.

S

Sahara

The world's largest non-polar desert. The very existence of the Sahara has played a major role in the cultural and political history of the African continent. Because the Sahara extends from the Atlantic Ocean to the Red Sea, this great desert bisects Africa, creating a sharp divide between the Mediterranean coast and the southern part of the continent, usually referred to as "sub-Saharan Africa."

Without the Sahara, whose name means "desert" in Arabic, Africa would have had a quite different history. Armies that came by sea to conquer the lands of Africa were often stopped by the desert from proceeding into the heart of the continent, allowing central African cultures to remain relatively isolated until the nineteenth century C.E. Food crops that were domesticated along the Mediterranean coast or in the Nile Delta could not easily survive in the desert, so the development of intensive agricultural societies in the southern part of the continent was blocked by this almost impenetrable barrier.

The Sahara today is about 3.5 million square miles (9.1 million sq km) in area—about the size of the continental United States—and is divided into eleven countries: Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Sudan, Tunisia, and Western Sahara. The landscape of the Sahara consists of large sand dunes known as *ergs*, plains of sand called *regs*, and high rocky plateaus called *hamadas*. *Wadis* are depressions in the land that occasionally fill with water. There are also salt-filled depressions called *chotts*.

Although rainfall in the Sahara is only about 3 to 5 inches (7.5 to 12.5 cm) per year, this desert was not always as dry as it is today and has undergone much variation in rainfall over the past 100,000 years. However, the climate has remained fairly consistent for the past 2,000 years, except for a period from the sixteenth to the eighteenth century C.E., known as the "Little **Ice Age**," during which the climate was quite a bit wetter. The average air temperatures have also varied quite a bit over the centuries, but today they range from an extreme high of 136°F (58°C) to a low of below freezing.

Because the Sahara is such a harsh environment, few people have ever lived there. Among those who do are Berbers, Bedoins, Nubians, and the Touareg. The Touareg are perhaps best known for leading caravans across the desert, carrying luxury goods such as salt, pepper, gold, and ivory from cities, such as Timbuktu, at the southern edge of the Sahara, to the Mediterranean coast. The Touareg also traded in slaves from the fifteenth through the nineteenth centuries C.E. Known as the "blue men of the desert" because of

their robes dyed indigo blue, the Touareg have long lived a nomadic existence in one of the world's least hospitable environments.

Today, the Sahara appears to be growing. In a process known as "desertification," this dry ocean of sand seems to be devouring the land to its south, a strip of semi-arid land known as the *Sahel*, from the Arabic for "edge" or "border." Scientists estimate that the Sahara is expanding southward at the rate of 3 to 6 miles (5 to 9.5 km) a year. One of the major causes of this problem is ecological damage done to the land by humans, as they farm and graze their animals in the Sahel—a delicate ecosystem that cannot support the demands the human population makes on it. While this loss of arable land to desert can be slowed by the use of organic farming methods, it will take a major effort to assist the farmers of the African Sahel, who live too close to the edge of starvation to be able to make many of the changes that will be needed, such as leaving fields fallow and avoiding the use of pesticides and chemicals.

The Sahara is not the only one of the world's deserts that is threatening to take over the neighboring land. Some scientists fear that as much as 35 percent of the earth's land may be at risk of becoming desert unless steps are taken to preserve fragile environments.

See also: Agriculture; Berbers; Egypt; Libya; Nubia; Salt Trade; Slavery; Timbuktu.

FURTHER READING

Villiers, Marc de, and Shelia Hirtle. *Sahara: A Natural History of the World's Largest Desert*. New York: Walker Books, 2002.

Salt Trade

The production and transportation of salt in ancient Africa had a significant impact on the development of caravan routes and on the cultures along those routes. Today salt is plentiful and cheap. It is so readily available and so much a part of our diet that few people realize how crucial it is to maintaining human life, how scarce it was once thought to be, and how important it was to trade and commerce in ancient Africa.

The earliest humans, who lived by hunting and gathering, got the salt they needed from the meat they consumed. Even today, Maasai cattle herders of East Africa drink animal blood in order to get the necessary salt. Early humans may have also found salt by following animals to salt licks or brine springs. However, once cultures began to domesticate animals and raise crops, people needed to add salt to their diets and to the diets of the animals they domesticated. In addition to its function in preserving human life, salt has also been used for thousands of years to preserve food so that it can be kept for long periods of time without spoiling.

Because salt was so essential to life, many cultures invested it with spiritual significance. In societies all over the world, salt is a symbol of permanence and long life, as well as fertility. In ancient Egypt, a kind of salt called *natron* was required for the mummification process. The Egyptians also used salt as a cosmetic, a cleaning product, a way to drive off evil spirits, and a preservative. In parts of Africa, according to Mark Kurlansky in *Salt: A World History* (2002), people believed that evil spirits shed their skin at night and traveled as balls of fire. To destroy the spirits, one had to find and salt their skin.

Although it is now clear that almost no place on earth is without salt, this knowledge came only with the advent of modern drilling techniques. In ancient times, salt was deemed difficult to find. Because it was so important to life, it was naturally valuable.

LINK IN TIME

Ancient and Modern Salt Production

Salt is essential to both human and animal life. For most of human history, salt was a highly valuable commodity because it was believed that underground salt deposits were extremely rare and extracting salt from seawater was a laborious process. Modern geological methods, however, have revealed that salt is one of the most plentiful minerals on earth, making it very inexpensive. There is so much salt on earth because much of the land was once covered with ocean water, which left underground salt deposits.

Ancient people produced salt mainly by evaporating of seawater. Typically, the water was stored in shallow basins and warmed by sunlight. As the water evaporated, the salt it contained was left behind. Salt obtained in this way was often called bay salt.

The development of vacuum evaporation in the late nineteenth century C.E. revolutionized salt making. This method involves placing supersaturated brine (saltwater) in enclosed vessels and boiling the solution under a partial vacuum. The ancient method of basin (or pan) evaporation continued to be used, however, because that method produced coarse grains of salt. Only in 1948 did scientists figure out how to produce coarse-grained salt through vacuum evaporation.

Roman soldiers were even paid part of their wages in salt, which is the origin of the word "salary," from the Latin word *sel*, meaning "salt."

Because salt is heavy and bulky it was often formed into pillars or mined in 200-pound (90-kg) blocks. Transporting it from places where it was plentiful to places where it was thought to be scarce was a problem in the ancient world. Most often, raw salt was transported by ship. Even more frequently, salt was used to preserve meat and fish, and the preserved flesh was shipped instead.

On the African continent, the Sahara Desert contained many sources of salt in dry lakebeds. However, until the first camels arrived in Africa in about C.E. 300, transporting salt to West African kingdoms—where there was plenty of gold but little salt—was slow and difficult. Domesticated in the Middle East as early as 5000 B.C.E., the camel's arrival in the Sahara revolutionized caravan travel.

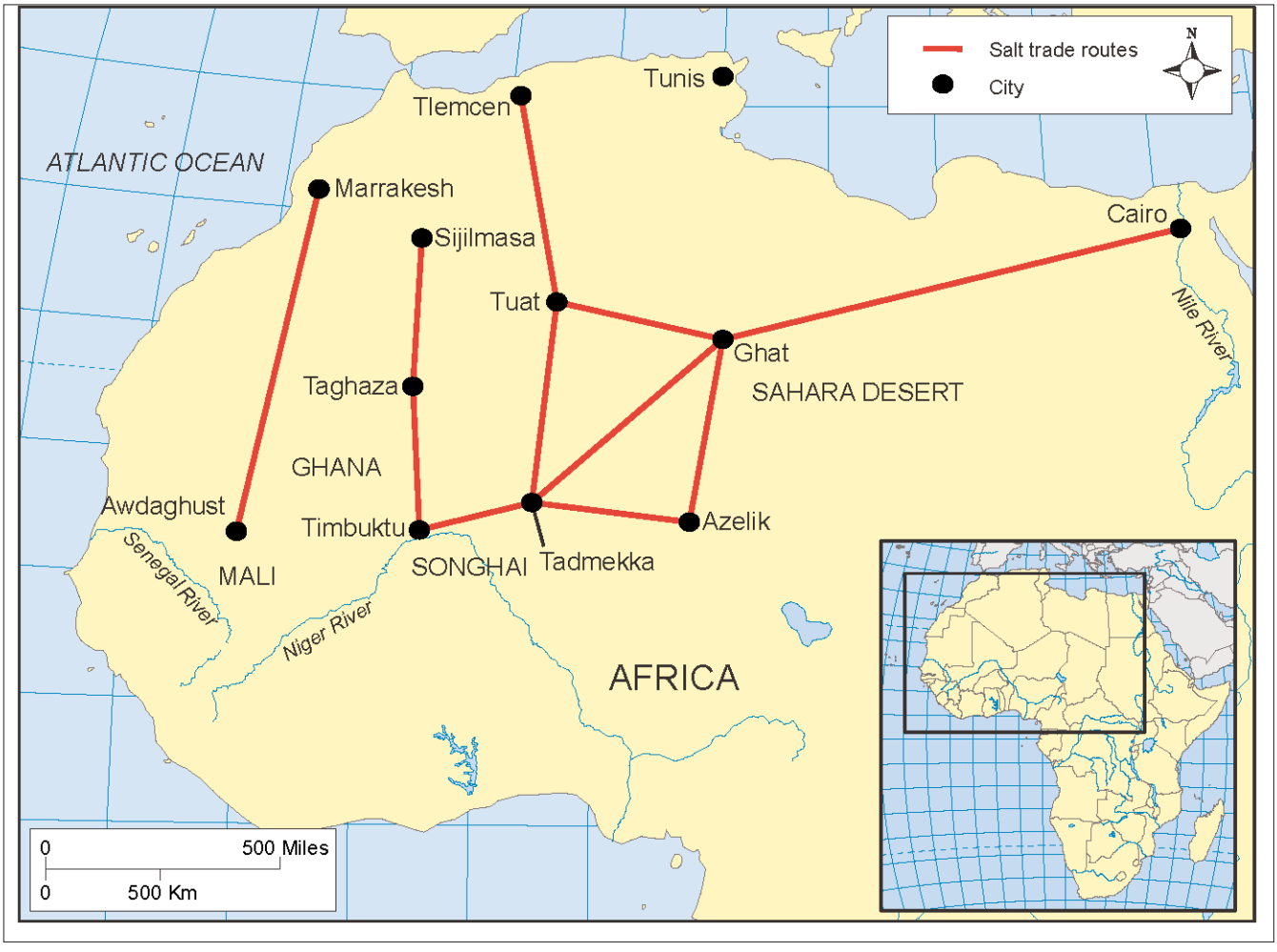
Caravans of as many as 40,000 camels began making the dangerous month-long trip from the saltworks at Taghaza to Timbuktu, located on the southern edge of the Sahara at the great bend of the Niger River. Timbuktu became a great city and trading center that has endured to this day because of its central location along the caravan routes. Several great African empires developed largely because of the caravan route, including those of Ghana, Mali, and Songhai. Their rulers taxed the caravans and in turn provided protection from thieves as the caravans moved through their lands. Other caravans traveled to Sijilmassa in northern Africa and Cairo in Egypt, linking the northern third of Africa from coast to coast.

Legend holds that salt was traded ounce for ounce for its weight in gold, but this is probably an exaggeration, even though salt was quite valuable. This story probably arose from observers who watched the process of silent bartering used by Arab and African traders. Traders would pile their store of salt on the ground and walk away. Then other traders would stack gold near the salt. The first traders returned, and if the amount of gold was deemed sufficient, they would take it and leave the salt. It is doubtful that the piles were of equal weight or indeed that weight had anything to do with the transaction—but it probably appeared to observers that the piles were equal.

One of the major sources of salt was the desert city of Taghaza, where slaves worked in dreadful conditions in the salt mines. Ibn Battuta, the Islamic scholar and travel writer, spent 10 days there on his way to visit the kingdom of Mali in C.E. 1352. Most of the city's buildings were made of salt,

ROUTES OF THE ANCIENT SALT TRADE

Salt has been mined in the Sahara for thousands of years. An essential component of the human diet, salt was a valuable commodity that was traded along routes that connected West Africa with North Africa. After the introduction of the camel by Romans in about C.E. 300, trade expanded rapidly.



which may conjure images of a beautiful, white crystal city. To the contrary, Taghaza's salt buildings were a drab gray, badly pitted by desert winds, with roofs made of camel skins. Battuta described Taghaza as "the most fly-ridden of places" and complained that even the water was salty. Moroccan forces destroyed Taghaza in the sixteenth century C.E., and Taoudenni replaced Taghaza as the area's leading producer of salt.

To this day, Berber Touareg tribesmen still cut blocks of salt from the earth in Taoudenni and still travel in caravans to Timbuktu to sell it, though for much less than it once brought.

See also: Berbers; Ghana; Ibn Battuta; Mali; Songhai Empire.

FURTHER READING

Benanav, Michael. *Crossing the Sahara on the Caravan of White Gold*. Guilford, CT: Lyons Press, 2006.

Kurlansky, Mark. *Salt: A World History*. New York: Penguin, 2002.

Sheba, Queen of

Legendary African queen who is the subject of similar stories recorded in the Hebrew Bible, the Quran, and the *Kebra Negast*, or the Book of the Glory of the kings of Ethiopia. The location of the historical kingdom of Sheba remains a mystery, although many scholars speculate that the name refers to Saba, a kingdom in what is now Yemen. The extent of the Sabean kingdom is unknown, and it may have included modern Ethiopia as well.

According to the tale recounted in the Bible, the Queen of Sheba traveled to Jerusalem to meet the famed Hebrew king Solomon and "to prove him with hard questions." The Biblical account goes on to say that "she communed with him of all that was in her heart."

The story of Sheba and Solomon in the *Kebra Negast*, the thirteenth-century C.E. Ethiopian national epic, adds many details not found in the Biblical story. The *Kebra Nagast* claims that Sheba was an Ethiopian queen known as Makeda. According to

This Ethiopian miniature from the *History of Solomon and the Queen of Sheba* portrays King Solomon and the Queen of Sheba at a banquet. The queen is seated on a throne at the right-hand side of the painting and Solomon is on the far left. (Giraudon/Art Resource, NY)

this version of the story, the queen converted to Judaism and, when she left Solomon's court, she was pregnant with his child. Several months after her return to her capital city of Axum, she bore a son whom she named Ibn al-Hakim, or "son of the wise man." The son later changed his name to Menelek. When Menelek was 22 years old, he visited Solomon, who recognized his son immediately. Solomon wanted Menelek to succeed him to the throne of Israel, but the young man chose instead to return home to rule in his own land. Ethiopians believe that all their rulers since Menelek are descendants of Solomon, down to Haile Selassie (r. 1930–1936 and 1941–1974), the last emperor of Ethiopia.

The Ethiopian story of Sheba also recounts how the Ark of the Covenant came to Ethiopia. According to the Bible, the Ark was a wooden box constructed to hold the tablets on which the original Ten Commandments were inscribed. To the Jewish people, the Ark was the visible sign of God's presence among them. According to the Ethiopian legend, when Solomon ordered his counselors to send their oldest sons to Sheba to spread their religion among the people, the counselors rebelled and had the Ark taken to Ethiopia. Orthodox Ethiopian Christians believe the Ark still exists at St. Mary of Zion Church in Axum, tended by an aged priest, the only person allowed in its presence.

Whether or not there ever was a real Queen of Sheba, her legend lives on. She has been variously portrayed as a powerful woman, a seductress, a youthful scholar, and a wise leader. She has been the subject of hundreds of paintings and many operas. As the embodiment of all the aspects of femininity, the Queen of Sheba continues to fascinate.

See also: Axum; Myths and Epics; Religion.

FURTHER READING

Brooks, Miguel F. *A Modern Translation of the Kebra Nagast (The Glory of Kings)*. Trenton, NJ: Red Sea Press, 1996.

Clapp, Nicholas. *Through the Desert in Search of the Legendary Queen*. New York: Mariner Books, 2002.

Slavery

When most people think of slavery, the first thing that comes to mind is the enslavement of Africans by people in the Americas. However, the practice of slavery dates back to ancient times, and many African cultures were involved actively in the slave trade.

Like many ancient cultures, the ancient Africans often enslaved captives taken during successful military campaigns. Conquered peoples were forced to pay **tribute** to their Egyptian rulers, often in the form of slaves. Egyptians themselves could be enslaved if unable to pay a debt, and some even accepted slavery as a way to escape poverty. Criminals might also be enslaved as punishment for their crimes.

Slaves might be sent to work in the dangerous mines in Nubia and the Sinai, where they died in great numbers. Some were forced to fight in the army. Others became domestic servants to individual families; in many cases, slaves were attached to large estates, in much the same way medieval serfs belonged to the lord of the manor on which they lived. Female slaves were valued for skills in weaving and other domestic chores; some were sold as concubines. During the pre-dynastic period in Egypt (5500–3100 B.C.E.), living slaves were entombed with their masters so they could continue serving them in the afterlife. In later **eras** of Egyptian history, *ushabtis*, or small statues representing servants of the deceased, were substituted for the slaves themselves.

Beginning in the seventh century C.E., Muslim slave traders took millions of slaves in Africa,

exporting them throughout the Islamic world, as far away as Turkey, Arabia, Persia, and India. Some male slaves would be castrated; these *eunuchs* were valued as confidants of their masters and given powerful positions. In some cases, entire Islamic armies were comprised of slaves. Arab slave traders often sold females slaves into harems or into domestic service. The Muslim holy book, the Quran, encouraged masters to free slaves when they died, and many did so.

Usually there was no racial component to enslavement of Africans by other Africans. Both the slave owner and the slave typically were black, although they were often members of different **tribal** groups. Thus, slaves in ancient Africa were not considered inherently inferior to their owners, and some eventually rose to positions of influence and power. Olaudah Equiano, who was enslaved in Africa and eventually brought to the Americas, provides valuable information about traditional African slave practices in his 1789 book *The Interesting Narrative of the Life of Olaudah Equiano*. According to Equiano, he and his family owned slaves, and his tribal group had to be on the alert against raiders who would steal into the village and kidnap children—as eventually occurred to Equiano himself. Equiano was kept as a slave in Africa for several months, and reports that his owners treated him like a member of the family.

See also: Egypt.

FURTHER READING

Greene, Jacqueline Dembar. *Slavery in Ancient Egypt and Mesopotamia*. New York: Watts, 2000.

Lovejoy, Paul E., et al. *Transformations in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 2000.

Society

Among ancient African peoples, the family and gender structures, social classes, laws, and political systems reveal those ideas that served to unite each group of people. Sociologists often describe societies by reference to how they acquire the means to live. On the African continent in ancient times, for example, there were hunter-gatherer societies, nomadic societies, and pastoral societies, as well as simple and intensive agricultural societies.

Another way to classify societies is by political structure. From the simplest to the most complex, there are bands, tribes, chiefdoms, and state societies. All of these social forms existed in ancient Africa.

EARLY SOCIETAL STRUCTURE

Because most ancient African **tribal** cultures had no form of writing, little is known about how these people actually lived. However, there are still many tribal cultures in Africa, and scholars often speculate on ancient social life based on how people living in traditional cultures today live and work.

The first humans on the African continent lived in bands, small groups of related people with informal leadership. Bands do not have laws, and customs are transmitted orally. Most bands are hunter-gatherers, people who move from place to place following the animals they hunt. The San of the Kalahari Desert in southern Africa are an example of a band society, one of the few that still exists today.

Tribes are similar to bands but are much larger, comprising several families, organized by kinship. Like bands, tribes tend to be oral societies in which customs and taboos are conveyed orally. Leadership, however, is more formal, invested in the hands of chiefs or elders. Tribes may be nomadic or agricultural; members of agricultural tribes tend to own land in common and to be relatively egalitarian. Nomadic

This photograph shows a Masai warrior who has just undergone an initiation ceremony that included circumcision. The young man is now considered an adult in the tribe. (Tim Graham/Getty Images)

societies are also egalitarian and often **matriarchal**. Among the Touareg of the Sahara, for example, women choose their own husbands and sexual partners, and, in fact, may take lovers when their husbands are away. They own property and, in the case of divorce, get custody of the children.

Chiefdoms are more complex than tribes and less complex than states. Unlike tribes and bands, chiefdoms are characterized by a **hierarchical** class structure. There are usually two social classes, elite and commoner, and each individual is born into a particular class. Power is centralized, and

leaders tend to be male. The Ashanti of Ghana are an example of a chiefdom that existed in ancient times and still exists today. The chief, who is male, inherits through the mother's line.

Women in Tribal Cultures

According to South African law professor Gardiol van Niekerk, women in African tribes and chiefdoms were honored and played a key role in society. Power traditionally was determined by the needs of the society as a whole, with little regard to gender. Positions of power, according to van Niekerk, "were accorded in the interest of the collectivity and women in power roles did not cause any tension or disharmony." He notes that European colonialism had a very negative effect on the status of women in African society because colonial officials would deal only with male tribal leaders.

While women and men enjoyed roughly equal social status in many tribes, the sexes in other societies were treated quite unequally. For example, the Maasai of Kenya did not allow women to own property, divorce, or make important decisions.

Children in Tribal Cultures

In traditional African cultures, women are especially valued for their roles as mothers. This is as true today as it was in ancient times. Children learn their adult roles by working with and for their elders, helping in the fields and with the crops. Because harmony is so important in a small, collective society, a child's transition into adulthood is an especially important moment.

Many traditional societies still practice initiation rites to help children make the transition into adulthood. A major part of most rites is instruction, in which children learn the secrets of religion and how they are expected to behave as adults. The magical and religious quality of the process helps to underscore the importance of the transition and to ensure compliance. As a result, adolescent rebellion in traditional societies is rare.

Law

Most ancient African cultures did not have written codes of law. Generally the code of conduct was clear and known to all members of the tribe. While some taboos in traditional tribal societies were equivalent to the crimes in modern Western society (such as murder, theft, or rape), others, such as failure to respect parents and elders or lying, were not. Punishment in tribal societies is generally communal; someone who violates a taboo is likely to be ostracized or punished by the whole group.

EGYPTIAN SOCIETY: EMERGENCE OF THE STATE

In about 3100 B.C.E., Egypt became the first state in ancient Africa and one of the first in the world. A state is an organized community with clearly demarcated boundaries, a strong centralized government, and sovereignty—the quality of being independent of other states. States generally impose taxes on their citizens, and conflict is resolved by reference to law rather than by the decisions of individual leaders. States have more complicated economies than chiefdoms and tribes, and more specialization of labor. They also have a more complex social organization and multiple social classes, including an **aristocratic class**.

Egypt evolved into a state as a result of large-scale agriculture made possible by the annual inundation of the Nile River. The Egyptians exploited the Nile flood, developing irrigation techniques that allowed them to farm extensive tracts of land surrounding the river. This yielded regular food surpluses that freed a portion of the population to pursue activities unrelated to farming, such as metalworking, pottery, and medicine. Occupational specialization led to the appearance of social classes, as those who possessed specialized skills came to be considered more valuable to society than peasants or laborers. In addition, a sophisticated **bureaucracy** eventually evolved to govern this increasingly complex society.

Many sociologists compare the structure of Egyptian society to a pyramid. At the top were the gods. Just below them was the pharaoh, believed to be a god in human form. It was the pharaoh's duty to intercede with the gods on behalf of the people, to ensure the annual inundation of the Nile, and to protect the people from internal conflict and external invaders.

LINK TO PLACE

Initiation Rites: The Xhosa and the Lakota

Many traditional cultures have special rites to initiate young men and women into adulthood. Among the Xhosa of South Africa, post-pubescent boys are removed from the village and taken to a special initiation hut, where they are circumcised and kept in seclusion for three months. During this period, the boys are taught about their responsibilities and rights as adults. After bathing together in a **ritual** cleansing, they receive gifts of blankets and return home. The young men are greeted with a celebration that includes dancing and animal sacrifices.

The Lakota (also known as Sioux) of the western plains of the United States also practice an adolescent initiation rite, known as a vision quest. Young men usually undergo the rite, but women may also choose to participate. The vision quest is an individual initiation, not a group ritual such as that of the Xhosa. The purpose of the vision quest varies. Some people undertake a quest as a kind of prayer, asking for guidance in making decisions. Others, especially young people, seek to know what they should do with their lives or how they should live.

The rite begins with a young person bringing a pipe to an elder or holy man and asking for help in beginning his quest. On the day appointed for the quest, the seeker begins by purifying himself in a sweatlodge, a small hut in which ritual steam baths are undertaken. Then he spends up to four days alone praying and meditating. He may sleep upon a bed of sage leaves but may not eat or drink. The seeker prays to Wakan Tanka, the Lakota supreme being, for a message, which often comes in the form of an animal or bird. The seeker collects an object that relates to the vision—for example, a feather from a bird or the fur of an animal—and keeps it with him as a reminder of the experience. After this, the seeker returns home and tells the elder his vision.

Below the pharaoh in Egypt's social structure was his second-in-command—the vizier—who often interacted with the people in the pharaoh's place and did many of the day-to-day administrative tasks of running the kingdom. Below the vizier were the members of the nobility, including government officials who administered justice, collected taxes, and performed other administrative functions, and high priests, who conducted religious services and interpreted the wishes of various deities to the pharaoh and others.

On the next level of the pyramid were Egypt's professionals—priests, doctors, and engineers. Because the ability to read and write was both rare and essential to the conduct of daily affairs, **scribes** were high-status individuals, just below professionals on the social pyramid. Successively below the scribes were merchants, **artisans**, farmers, and soldiers. Below these groups were servants and slaves. Although Egypt was a highly stratified society, it was not rigid; individuals could rise in social class. For example, if soldiers were victorious in battle, they might be given gifts of land, which raised their class. In Egypt, it was possible to rise to the ranks of nobility.

Women and Children in Ancient Egypt

Egyptian society was largely **patriarchal**, in that the rulers were most often men, but it was much less so than many other ancient cultures. For example, the royal lineage was traced through the mother, so someone aspiring to become pharaoh had to marry a woman of the royal line. In Egypt, women could inherit a husband's or relative's estate, own land, run businesses, and work as perfume makers, professional mourners, acrobats, singers, musicians, or priestesses. Women could also buy, sell, and bequeath their own property as they chose;

make contracts; and appear in court on their own behalf. They could also disinherit anyone they chose.

Boys often inherited a trade from their fathers. If the father was a carpenter, it was likely that one or more of his sons would also become a carpenter. Boys were generally apprenticed to their fathers to learn a trade or craft. The sons of wealthier families were sent to school at about the age of seven, where they learned religion, reading, writing, and mathematics. Girls learned household management from their mothers, and were usually married fairly young—peasant girls as young as 12. Although most marriages were arranged, some girls could choose their own husbands.

Law

Egyptian society had a formal legal system and some laws were written down, but there was no complete legal code of conduct. Egyptian law was ruled by a belief in *Ma'at*, or equality and justice under the law for everyone except slaves. The pharaoh was the primary judge, though in practice he delegated this power to others. Anyone in a position of authority could serve as a judge, depending on the circumstances. Minor disputes were often settled by local elders.

Some cases were brought to **oracles** for decisions. Papers representing each side of a case might be placed on opposite sides of the street, in front of a statue of a god. If the statue leaned one way or the other (as interpreted by a priest), the case was decided. Interestingly, confession was the primary method of determining guilt. If a person refused to confess, he or she was generally set free. Punishment varied greatly. A thief might simply be asked to repay what he had taken, but more serious crimes might be punished by the cutting off a nose or hand, exile, or forced labor in the mines. The death penalty was carried out by impalement, drowning, or decapitation.

Although the Egyptians did not codify all of their laws, they did document court cases. This documentation is the primary source of contemporary knowledge about ancient Egyptian law.

Ancient African ways of living were quite varied, with some cultures having strong kinship ties and others weak ones. Even today, many Africans still define their identities by their membership in an extended family, not by what they do or where they live.

See also: Agriculture; Culture and Traditions; Egypt; Language and Writing; Religion.

FURTHER READING

Isichei, Elizabeth. *A History of African Societies to 1870*. Cambridge: Cambridge University Press, 1997.

Nurse, Derek, and Thomas Spear. *The Swahili: Reconstructing the History and Language of an African Society 800–1500*. Philadelphia: University of Pennsylvania Press, 1985.

Richardson, Hazel. *Life in Ancient Africa*. New York: Crabtree, 2005.

Songhai Empire (also Songhay)

One of the largest ancient African empires, covering a large area of the West African grasslands at its peak in the fifteenth and sixteenth centuries C.E. The empire extended from the capital city of Gao, located at the largest bend of the Niger River, through modern Nigeria, into parts of Mali, and as far west as the Atlantic coast.

Dominated from the ninth to the eleventh centuries C.E. by the empire of Ghana, and from the eleventh to the fifteenth centuries C.E. by Mali, the Sorko people of Songhai emerged as a major power

SONGHAI EMPIRE, C.E. 900–1600

CA. C.E. 900–1100 Songhai dominated by the kingdom of Ghana

C.E. 1464–1492 Rule of Sunni Ali, a great military leader who expanded the size of the empire

C.E. 1492 Sunni Ali succeeded by son, Sunni Baru

C.E. 1493 Sunni Baru overthrown by Mohammad Ture

C.E. 1493–1528 Rule of Mohammad Ture, who founded the Askiya dynasty; Golden Age of Songhai

C.E. 1496 Mohammad Ture made caliph of the Sudan

C.E. 1591 Ahmad al-Mansur, ruler of Morocco, conquers Songhai at the battle of Tondibi

under the leadership of Sunni (or Sonni) Ali (r. 1464–1492). Songhai grew wealthy through the export of gold, salt, and slaves.

Sunni Ali was a great military leader who substantially expanded the size of the empire, eventually dominating most of the land that had formed the Mali Empire. He also captured the city of Timbuktu, a center of Muslim learning, earning himself the eternal animosity of Islamic clerics, scholars, and soldiers. As a result of years of trade with Arab nations, many urban dwellers in Songhai were Muslim. Sunni Ali himself, however, practiced the traditional animistic religion of his ancestors.

Upon Sunni Ali's death, his son Sunni Baru succeeded him briefly before being overthrown by one of his father's generals, Mohammad Ture (r. 1493–1528). Ture founded the Askiya Dynasty and ushered in what has been called the golden age of Songhai. Ture was a devout Muslim who restored Timbuktu as a center of learning and built as many as 180 religious schools in that city alone. In 1496 the caliph of Egypt named Ture caliph of the entire Sudan, the Arab term for an area in sub-Saharan Africa that comprises present-day Mali, Chad, part of Nigeria, and Niger.

Ture was not only a successful conqueror who expanded Songhai to its greatest extent, but he was also an able administrator who successfully governed an empire of more than a half a million square miles (800,000 km). He created a professional **bureaucracy** that allowed well-educated people, regardless of social class, to find work in the government. This practice, a change from previous rulers who had relied almost exclusively on class as a prerequisite to government service, proved to be a major factor in his success.

Ture was overthrown by his son, Askiya Musa, in 1528. Over the next several decades, the empire suffered from civil unrest and drought. In 1591, Ahmad al-Mansur, the ruler of Morocco, invaded Songhai and was able to score a military victory over the weakened empire, partly because he possessed firearms. The Moroccans were never successful in dominating the former empire, however, which eventually degenerated into many small principalities.

See also: Ghana; Mali; Religion; Salt Trade; Timbuktu.

FURTHER READING

McKissack, Patricia, and Frederick McKissack. *The Royal Kingdoms of Ghana, Mali, and Songhay*. New York: Holt, 1995.

Quigley, Mary. *Ancient West African Kingdoms: Ghana, Mali, and Songhai*. Portsmouth, NH: Heinemann, 2002.

Stone Circles

Ancient formations made of gigantic stones located in modern Senegal and Gambia. Although prehistoric stone circles are found throughout Europe, the most famous of which is Stonehenge in England, nowhere are there as many as in the 15,000-square- mile (38,850-sq-km) area between the Saloum and Gambia rivers in West Africa.

West Africa boasts more than 1,000 groups of stone circles. One of the largest groups is near the Bambian village of Wassu. Other sites include N'jai Kunda and Kerr Batch, all in modern Gambia.

The stones vary in appearance. Most are shaped like pillars, round with a flat top. Some are rectangular, some taper to a point, and others have cup-shaped hollows on top. The most unusual are known as lyre stones, because they resemble the musical instrument of that name. Lyre stones were formed by placing two large upright stones at an angle to one another, in the shape of a V.

Each circle is made up of 10 to 24 stones, the largest of which weighs up to 10 tons (9 metric tons). The stones range from 3.5 feet (1.1 m) to 8.5 feet (2.6 m) tall. All the stones in a particular circle are approximately the same size. The stones are made of laterite, a red clay that hardens when it is exposed to air, making it easy to quarry.

Laboratory tests indicate that the circles were built during the eighth century C.E., but who constructed them and for what purpose remain mysteries. One Islamic scholar has speculated that the stones mark graves. He believes that the V-shaped stones may indicate the grave of two relatives who died on the same day and that a small stone near a larger one may indicate the graves of a parent and child.

Archeoastronomers—those who study ancient sites that appear to have something to do with astronomy—believe that some of the stone circles may have been used for the observation of the stars and the development of calendars. This interpretation, if correct, would link these African **megaliths** with such places as England's Stonehenge, another collection of huge stones believed to have been used as an astronomical observatory at which early humans could mark each year's **solstices** and **equinoxes**.

See also: Archeological Discoveries.

FURTHER READING

Burl, Aubrey. *A Guide to the Stone Circles of Britain, Ireland, and Brittany*. New Haven, CT: Yale University Press, 2005.

Sundiata See Mali; Myths and Epics.

T

Technology and Inventions

Tools and methods to farm, build, make war, and cure disease all were developed on the African continent before C.E. 1500. Because the earliest known human species evolved in Africa, so did many of the earliest human technological advances.

In the history of science and technology, Africa looms large. Stone implements more than a million years old have been found in Africa, including hand axes, cleavers, scrapers, and **microlithic** tools. Ancient stone circles and rectangles discovered in Africa may have been foundations for shelters. In 2001, the earliest known "formal" tools (those with specific uses and symmetrical shapes) were discovered in South Africa's Blombos Cave. Archeologists have dated these tools to about 70,000 years ago.

SUB-SAHARAN TECHNOLOGY AND INVENTIONS

In addition to the earliest tools, the people of sub-Saharan Africa made many contributions to technology. In smelting iron, for example, sub-Saharan Africa was far ahead of other parts of the world. It was once thought that iron technology was imported to Africa, but a 1991 United Nations project, "Iron Roads in Africa," suggests that Africans developed iron working independently as many as 5,000 years ago, in what is now Nigeria, Niger, and Mali. In fact, African metal smiths first manufactured steel in the second century B.C.E., some 2,000 years before their counterparts in Europe and America.

Examples of ancient African technology encompass a variety of fields of knowledge. The Yoruba people of Nigeria developed a complicated number system on a base of 20. The oldest iron ore mine in the world, dated at around 40,000 years ago, has been discovered in Swaziland. Doctors in Mali performed cataract surgery in the fourteenth century C.E. Ancient myths told by the Dogon people of Mali recount stories of *po tolo*, their name for Sirius B, a white dwarf star. (A star becomes a white dwarf when it has used up all its nuclear fuel.) The knowledge of the Dogon is particularly remarkable because white dwarfs are not visible without a telescope. The people of Ethiopia were the first to grow coffee.

EGYPTIAN TECHNOLOGY AND INVENTIONS

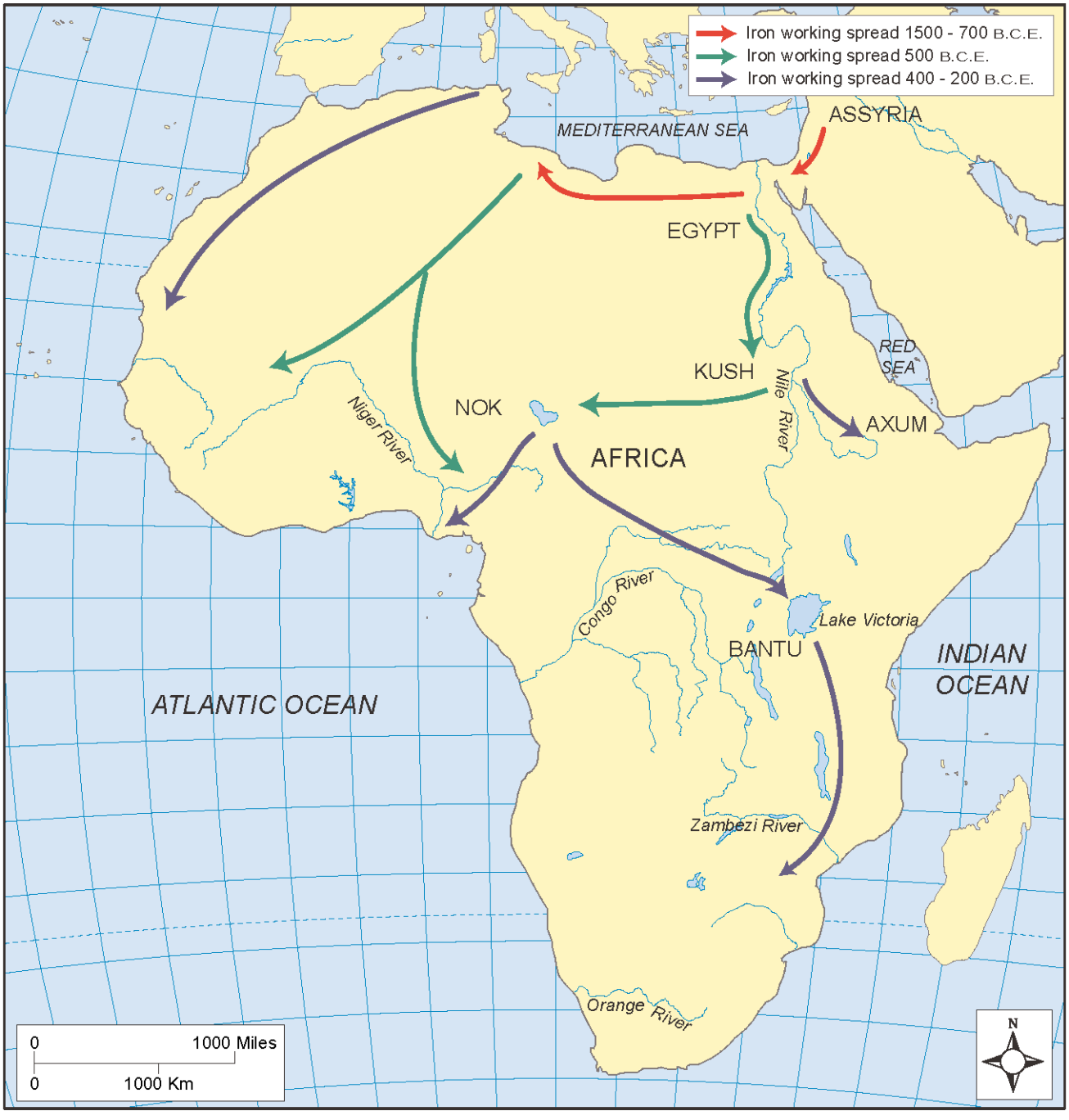
The ancient Egyptians were great innovators. Their inventions include paper, irrigation, timekeeping devices, locks, embalming, and beekeeping, among many other things.

Medicine

The Egyptians were excellent physicians. In the *Odyssey*, the ancient Greek poet Homer tells us that

THE SPREAD OF IRON WORKING, CA. 600 B.C.E.–C.E. 400

Iron-smelting technology was probably introduced into Africa from the Mediterranean and spread into western Africa, where the technology was widely practiced. Iron technology may have traveled from western Africa along with the migrating Bantu.



"In Egypt, the men are more skilled in Medicine than any of human kind."

Because of their belief in the importance of preserving the body, Egyptians invented the practice of

This artificial toe was found in the tomb of a Theban woman. Most ancient Egyptian artificial limbs were cosmetic, used to make the mummy whole before its journey to the afterlife. This toe, however, was functional. (Kenneth Garrett/National Geographic/Getty Images)

embalming. Since the process involved removing internal organs, Egyptian embalmers learned a great deal about human anatomy and were able to correctly identify the function of all the organs, except for the brain and heart. They believed that the heart was the source of knowledge, but that the brain served no purpose.

Much of what is known today about Egyptian medicine comes from a number of surviving papyri that discuss medical practices and techniques. Among the oldest of these codices is the Kahun Gynecology Papyrus, which dates to 1825 B.C.E. (The papyrus was discovered by British archeologist Flinders Petrie near the town of el Lahun. Petrie misheard the name of the town as "Kahun," and so named the papyrus Kahun.) It discusses how to diagnose a pregnancy, how to treat various ailments unique to women, and how to avoid conception—one technique involved a mixture of crocodile dung and fermented dough (the acidity of the dung made it an effective spermicide).

The most famous of the medical papyri is the Edwin Smith Papyrus, which was found in the tomb of a physician and describes a number of surgical procedures. The Smith Papyrus dates from 1550 B.C.E. and indicates that the Egyptians had extensive knowledge of how to treat bone fractures, perhaps derived from the injuries received by workers on the pyramids.

Another source for Egyptian medical knowledge, the Ebers Papyrus, was discovered in C.E. 1862 by archeologist Edwin Smith but was then sold in 1872 to the German Egyptologist Georg Ebers, for whom it is named. This 110-page medical treatise was written in 1534 B.C.E. It deals primarily with internal medicine, including the workings of the heart, about which the ancient Egyptians were quite knowledgeable, although they could not distinguish among blood vessels, nerves, and tendons. Therefore, they did not completely understand circulation. However, they did understand the function of blood vessels and the importance of taking the pulse.

The first surgical instruments were made in Egypt, including copper surgical blades and needles. A **relief** carved at the Kom Ombo temple about 100 B.C.E. shows a set of surgical instruments including a probe, forceps, saws, a retractor, a cautery (burning iron), bandages, a flask, scales, medicinal plants, a pair of shears, a sponge, scalpels, an instrument case, and cupping vessels used for blood letting, a common ancient medical practice.

Many herbal and mineral remedies used by Egyptian healers have been found to be very effective by modern doctors, even though the ancient

TECHNOLOGY AND INVENTIONS

2500 B.C.E. Sadd al Kafara, the first known dam in history, is constructed

2400 B.C.E. One of the earliest Egyptian canals is built at the First Cataract of the Nile by the pharaoh Pepi I—the first "Suez Canal"

CA. 2000 B.C.E. Egyptians invent the first clocks, which used water that dripped at a constant rate to tell time

1825 B.C.E. The Kahun Gynecology Papyrus, which details Egyptian medical knowledge about the female reproductive system, is written

1550 B.C.E. The Smith Papyrus is written, detailing Egyptian surgical techniques

1000 B.C.E. Earliest lock and key system invented by Egyptians

800 B.C.E. Earliest known sundial in use, an Egyptian shadow clock of green schist, which consisted of a base with a raised crosspiece; the shadow of the crosspiece on the base tells the time

610–595 B.C.E. Pharaoh Necho II extends an ancient version of the Suez Canal to the Gulf of Suez on the Red Sea

525–504 B.C.E. Persian rulers of Egypt re-dig the Suez Canal

290–270 B.C.E. Alexandria Lighthouse, or Pharos, one of the Seven Wonders of the Ancient World, is constructed in Egypt, on the Mediterranean coast

CA. 100 B.C.E. African smiths discover how to produce high temperatures in village furnaces; reliefs carved on Kom Ombo Temple show a set of Egyptian surgical instruments

CA. C.E. 1400 Doctors in Mali perform cataract surgery

doctors may not have understood the biological processes by which the remedies worked. Kohl, the black eye makeup favored by the Egyptians, in fact, not only reflected the sun's glare—the Egyptian equivalent of sunglasses—but it also protected the eyes from bacteria. Egyptian doctors typically applied yeast to wounds in order to prevent infections, but they did not understand why it worked. Modern doctors now know that yeast has an antibiotic effect.

Agricultural Innovations

Egyptians were also great innovators in irrigation and agricultural methods. They invented the plow and were the first people to dig canals and construct dams. The Sadd al Kafara is an Egyptian dam south of Cairo dating from 2500 B.C.E., parts of which still survive. It was 348 feet (106 m) long and 37 feet (11.3 m) high, with walls 78 feet (23.8 m) thick at the base. The dam formed a reservoir to provide drinking water for workers at a stone quarry.

Among the earliest canals ever built was constructed around 2400 B.C.E. under Pharaoh Pepi I, at the First Cataract of the Nile (near modern Aswan). This canal made it easier to transport granite down the river in large ships. It was 295 feet (90 m) long, 32 feet (9.75 m) wide, and 29 (8.8 m) feet deep. The first "Suez Canal," joining the Nile and the Red Sea, was dug by the ancient Egyptians during the thirteenth century B.C.E. While the Persians ruled Egypt (525 to 504 B.C.E.), King Darius I had the canal re-dug and proclaimed on a stele, "I gave the order to dig this canal from the

River Nile which is in Egypt to the sea which reaches Persia."

Egyptians also used canals to irrigate their fields and to distribute the annual floodwaters of the Nile where they were needed. In addition, they invented the *shaduf*, a device that lifted water to higher elevations. A later invention, the waterwheel, allowed workers to lift 75,000 gallons (280,000 L) of water in 12 hours.

Pyramids

The building of the pyramids is universally recognized as one of the most amazing feats of construction in the history of human civilization. It is said that the stones of the Great Pyramid at Giza fit together so perfectly that a razor blade cannot be inserted between them. However, construction of the pyramids required more than knowledge of building techniques; it also required knowledge of practical mathematics and astronomy. Mathematical knowledge allowed architects to calculate the precise angles of the sides, while astronomical knowledge was needed to orient the pyramids in the four cardinal directions.

Interestingly, the Egyptian number system itself was relatively cumbersome, as it was difficult to multiply and divide. While in the modern system of numbers, multiplying 372 by 100 is relatively easy, the Egyptian symbol for 100 was a coiled rope, and they did not have the concept of zero. In compensation, they developed a binary system which allowed them to multiply, but it was complicated. Even so, Egyptian mathematics worked well enough that modern mathematicians still marvel at the precision of a pyramid's angles.

Paper and Writing

One of the most important inventions in the history of the world came from Egypt: paper in the form of rolls of papyrus. Before the invention of paper in about 4000 B.C.E., most **hieroglyphs** were carved into stone, a slow process indeed. Using ink-dipped papyrus reeds, **scribes** could write more quickly on paper than on stone and began to run their hieroglyphs together. This eventually led to a simpler form of writing called **demotic**, which was easier to master and allowed more people to learn to read and write. (Still only about one percent of Egyptians were literate until the Ptolemaic **era**, 332–30 B.C.E.) In addition to transcribing sacred texts and keeping records, scribes began to write poetry and works of fiction.

Paper originally took the form of long scrolls, not sheets bound into books as we know them today. The first book in the modern sense of the word was discovered at Dakhla Oasis in western Egypt, dating from C.E. 375, but it was not made of paper. Rather, leaves of wood were bound together with cord.

Calendars and Timekeeping Devices

The Egyptians also invented a remarkably accurate calendar. Their first calendar was based on 12 lunar months of 30 days each, or a year of 360 days. However, the Egyptians noticed that the Dog Star (Sirius of the constellation Canis Major) in the Big Dipper (part of the constellation Ursa Major) rose next to the sun every 365 days, at about the same time that the Nile flooded. This led to their development in 4236 B.C.E of a solar calendar just one quarter of a day off from our current calendar.

The Babylonians and Egyptians invented the first timekeeping devices at about the same time, 2500 to 2000 B.C.E. These were simply obelisks that cast shadows and allowed people to determine whether it was before or after noon. One of the earliest known water clocks was found in the tomb of Amenhotep I, who was buried in 1500 B.C.E., and the earliest known sundial, dated at about 800 B.C.E., was also found in Egypt. An early astronomical tool, the *merkhet*, was invented by the Egyptians around 600 B.C.E. The merkhet uses a string with a weight suspended from it to measure a straight line. Using two merkhets, Egyptian astronomers could determine a straight north-south line by lining them up with the North Star.

One of the earliest known lock-and-key systems was invented in Egypt around 1000 B.C.E. The key is wooden with brass pins. Inside the lock was another series of brass pins that were lifted when the key was inserted.

The great Egyptian city of Alexandria was the technological center of the ancient world from its founding in 331 B.C.E. The oldest lighthouse in the world was constructed there between 290 and 270 B.C.E. Alexandria's library was the largest in the world and a center for the study of mathematics and astronomy. The third librarian of Alexandria, Eratosthenes, calculated the circumference of the earth to within one percent of its actual value.

Egyptians were innovators in many other fields, including cosmetics, dentistry, gardening, jewelry making, mapmaking, and urban planning. Altogether, the Egyptians' use of technology allowed them to live much more comfortable lives than those of many ancient peoples.

See also: Agriculture; Alexandria; Archeological Discoveries; Art and Architecture; Egypt; Language and Writing; Nile River; Tools and Weapons.

FURTHER READING

Allen, James P. *The Art of Medicine in Ancient Egypt*. New York: Metropolitan Museum of Art, 2005.
Burgoyne, Thomas H. *The Light of Egypt or Science of the Soul and the Stars*. Kila, MT: Kessinger, 2003.
Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1997.
James, Peter, and Nick Thorpe. *Ancient Inventions*. New York: Ballantine, 1994.
Van Sertima, Ivan. *Blacks in Science: Ancient and Modern*. Piscataway, NJ: Transaction, 1990.

Timbuktu (Tombouctou)

Located in western Africa on the Niger River, a city crucial to trans-Saharan trade and one that later became a center of Islamic learning.

The expression "from here to Timbuktu" suggests a mysterious far-away place, perhaps the place farthest away from ordinary life. As a result of hearing this phrase, some people may believe that Timbuktu is mythical. To the contrary, Timbuktu was for centuries a thriving trade crossroads and administrative and cultural center. The expression derives from a time when Europeans believed Timbuktu was a mysterious city of gold but inaccessible to explorers because of its location on the southern edge of the Sahara.

Berber-speaking Touareg nomads founded Timbuktu in the eleventh century C.E. as an outpost along the trans-Saharan trade route. At first, the Touaregs camped along the Niger River, but they soon found that they became ill because of frequent mosquito bites. They eventually moved about eight miles (13 km) inland and dug a well, which in time became the center of a great city that grew around it. There are two versions of the story about how Timbuktu got its name. In one version, the nomads left a woman named *Tin Abutut* ("lady with the big navel") to watch over the well and their goods while they traveled through the desert. According to another version of the story, the woman's name was Buktu, and *Tin Buktu* means "Buktu's well."

Regardless of how it got its name, Timbuktu quickly became a center for the gold and salt trade. Salt came from Taghaza in the north, gold from the Empire of Ghana to the southwest. Arab merchants brought their religion with them along the trade routes, and much of western Africa eventually converted to Islam.

After the decline of the Ghana Empire in the twelfth century C.E., Timbuktu was incorporated into the Empire of Mali under the great ruler Mansa Musa (r. 1312–1337). The tremendous wealth of the city, and Musa's devotion to Islam, drew merchants and scholars from all over the world. Musa made Timbuktu world famous when he traveled from there to Cairo and then to Mecca on a *hajj*, or pilgrimage, in 1324. Stories of his great wealth gave impetus to the European ideas about Timbuktu; a European map from 1375 showed Mansa Musa

This close-up of the Djingareyber Mosque in Timbuktu highlights the texture of the mud walls. The wooden projections on the tower function as handholds for those who must reapply the mud after each rainy season. (Ariadne Van Zandbergen/Lonely Planet Images/Getty Images)

seated on a throne in the center of western Africa holding a gold nugget.

Returning from Mecca with a number of Arab scholars, including Abu-Ishaq Ibrahim-es-Saheli, the architect of the Moorish city of Grenada, Musa began a building campaign in Timbuktu. Ibrahim-es-Saheli built Musa's palace there, as well as the Djingareyber Mosque, also known as the Great Mosque, and the Sankore Mosque, which became home to Sankore University. At its height as a center of Islamic scholarship, Timbuktu boasted three universities and 180 madrasahs, or schools for the teaching of the Quran. By the 1450s, Timbuktu had a population of 100,000, fully a quarter of which were scholars.

In 1468, Sunni Ali (r. 1464–1492), ruler of the Songhai Empire, invaded and conquered Timbuktu. Ali, though Muslim himself, did not support Islamic scholarship. His son, Sunni Baru, succeeded him to the throne, but soon was overthrown by one of Ali's generals, Mohammad Ture, who ruled under the name Askiya Mohammed (r. 1492–1528). Askiya Mohammad ushered in the golden age of Timbuktu. Unlike Sunni Ali, Askiya admired scholars so much that he consulted them often on ethical and legal matters. Leo Africanus, a geographer and writer from Granada who visited Timbuktu during the reign of Askiya, had this to say about the importance of learning in the city,

> In Timbuktu there are numerous judges, doctors and clerics, all receiving good salaries from the king. He pays great respect to men of learning. There is a big demand for books in manuscript, imported from Barbary. More profit is made from the book trade than from any line of business.

Many people believed that the African scholars of Sankore University were more learned than their Arabic counterparts from Morocco and Egypt, both considered important seats of Islamic learning.

In 1591, the Moroccan sultan El Mansur conquered Timbuktu. During his initial raids on the city, most of the scholars fled; many others were deported. Over the next 200 years, the city declined not only as a place of learning but also as a center of trade.

But the myth endured. Stories of Timbuktu had such allure in Europe that, during the nineteenth century C.E., the Geological Society of Paris offered 10,000 francs for the first European to find his way there. A number of European explorers tried and failed, but in 1828 a Frenchman named René Caillé finally completed the dangerous trip. He was profoundly disappointed by what he found: "a mass of ill-looking houses, built of earth." He added, "Nothing was to be seen in all directions, but immense quicksands of yellowish white color . . . the most

LINK TO PLACE

The Great Mosques

Timbuktu was home to three great medieval mosques that are still in existence today, though all three are buffeted by blowing desert sand that threatens to engulf them. The mosques were constructed of banco, mud mixed with straw, a choice of material that may explain their longevity. For more than 600 years, residents of Timbuktu have gathered every year before the rains come to prepare quantities of banco to repair the mosques' walls. The work is looked on as a religious duty and involves hundreds of people.

Djingareyber, the oldest of Timbuktu's three mosques, was commissioned by Mansa Musa and designed by the architect Abu-Ishaq Ibrahim-es-Saheli. Known as the Great Mosque, Djingareyber was completed in C.E. 1327. It has three courts, two minarets, and can accommodate more than 2,000 people at prayer.

The Sankore Mosque was built between 1325 and 1433, funded by a wealthy resident. Its most unusual characteristic is its large *mihrab* in the shape of a pyramid. A *mihrab* is a niche found in the wall of every mosque which indicates the direction of the holy city of Mecca, to which the devout turn when they pray.

Sidi Yahia Mosque was constructed in about C.E. 1400 by Sheik El Mokhtar Hamallah to honor the coming of a saint whose arrival had been foretold. Named in honor of the saint, Sidi Yahia—designated the mosque's imam, or leader of prayers—about 40 years after its construction, the mosque has a room for winter prayers with three rows of pillars and an outer courtyard for use in the summer.

profound silence prevailed." Today, Timbuktu is an impoverished town with a population of only about 30,000 people.

See also: Berbers; Ghana; Mali; Salt Trade; Songhai Empire.

FURTHER READING

Kryza, Frank T. *The Race for Timbuktu: In Search of Africa's City of Gold*. New York: Ecco, 2006.

Sattin, Anthony. *The Gates of Africa: Death, Discovery, and the Search for Timbuktu*. New York: St. Martin's Press, 2005.

Tombouctou

See Timbuktu.

Tools and Weapons

Implements used for work and warfare in ancient Africa shaped the course of civilization. Ancient African tools and weapons reflect the particular needs and lifestyles of the people who designed them.

EARLY TOOLS

Humankind's earliest known tools were made of stone and have been found in Africa. Anthropologists call the earliest stone implements "opportu-

These bronze tools were used by ancient Egyptian woodworkers. Discovered in Thebes, they date from about 1300 B.C.E. (British Museum/HIP/Art Resource, NY)

nistic tools"; that is, hominids, or humanlike creatures, simply picked up a rock that had sharp edges and used it to cut and scrape. Then, about 2.4 million years ago, during the **Paleolithic Period**, people began to use round hammerlike stones to chip away at other stones in order to create sharp edges. The most commonly used stone for the creation of sharp edges was flint, which tends to flake easily. The resulting tools were used to strip the hides off animal carcasses, cut the stems of plants, or dig tubers and insects from the earth.

About 1.5 million years ago, more sophisticated tools appeared in Central Africa. At this time, an entire stone, rather than just one edge, was shaped, and tools with cutting edges on both sides were first created. About a million years ago, a tool called a hand axe made its debut. Hand axes were large, sharp blades with no handle and were used for butchering or chopping down trees.

Homo sapiens are believed to have originated in Africa about 200,000 to 250,000 years ago. Although these early creatures resembled modern humans in physical characteristics, they did not engage in formal tool making, the production of rather intricate tools with standard shapes and specialized functions. This process was believed to have occurred in Europe about 35,000 years ago. In C.E. 2001, however, the discovery in South Africa of 28 intricate bone tools that are at least 70,000 years old revolutionized ideas about when and where humans first began to make formal tools. It may be that the first tools were made in Africa much earlier than scholars once thought.

ANCIENT WEAPONS

Throwing Knives

African throwing knives are common cultural **artifacts**, ancient examples of which have been uncovered throughout a large part of what is now Central Africa, from the Sudan to Gabon to the Congo Basin. They are used even today by several different ethnic groups, including the Bangui, the Kuba, and the Mangbetu. These knives are made of forged iron and are from 1.5 to 2.5 feet (45 to 75 cm) long. They are shaped roughly like a lower-case "f," though some of the knives have more than two blades. Many of the knives are quite beautiful, not only because of their sinuous curves but also because of the sometimes intricate geometrical designs incised on the blades. The handles of the knives are usually made of woven fiber or hide.

Members of ancient African tribes such as the Buganda of Central Africa carried three or four of these knives, either slung over the shoulder or attached to the inside of a large shield. Throwing knives are primarily intended to wound the legs of an opponent or his horse, and the design ensures that the knife will do damage no matter what its angle of impact, because most have at least three cutting edges. According to art professor Pat R. McNaughton in his article "The Throwing Knife in African History," "A properly thrown knife could sever a leg at twenty meters (65 feet) and be thrown with accuracy to 50 meters (164 feet). The maximum range was 100 meters (328 feet)."

The knives were designed as much to terrify as to wound. Their highly polished surfaces reflected sunlight so they flashed as they hurtled toward their targets. The spinning motion resulted in a low whirring noise.

The knives had uses off the battlefield as well. The ruling elite often used versions that were more elaborate as symbols of power. In many places in Central Africa, they were even used as currency.

The first tools for farming were invented in about 8000 B.C.E. **Archeologists** have found many ancient Egyptian paintings on the walls of tombs that depict farm tools and how they were used. To make a sickle, ancient Egyptians joined two pieces of wood in a crescent shape, then inserted serrated flint teeth along the inside edge. The Egyptians also had simple wooden ploughs and hoes that were made by joining two sticks with a piece of rope. The handle of the hoe was short, forcing the hoer to bend over during the process. Egyptians also made wooden rakes, scoops, and mallets. In about 1600 B.C.E., Egyptians invented the *shaduf*, a bucket tied to a pivoting pole, used in irrigation. Irrigation allowed Egyptian society to exploit the annual flooding of the Nile, which in turn allowed them to grow surplus crops, which then allowed for the development of Egyptian civilization.

Probably the first metal to be worked in Egypt was copper, from which were made needles, saws, scissors, arrow tips, and knives. Before that time, cutting and sewing were done with stone or bone tools, which were much harder to shape than copper and therefore much less precise. By the Fourth Dynasty (2575–2467 B.C.E.), the Egyptians made tools of bronze, which was a great improvement over copper because bronze is much sturdier. The Egyptians did not learn to smelt iron until about the seventh century B.C.E.

Egyptian weaponry consisted of scimitars, knives, bows and arrows, swords, spears, battle axes, and maces. A few Egyptian soldiers wore body armor of leather covered with metal scales, but armor was not common because of the hot, dry climate. After the Hyksos dynasties (1630–1520 B.C.E.), the Egyptians also used chariots. In a typical battle, bowmen would begin the attack, followed by

infantry wielding battle axes and swords. Spear-carrying charioteers were most often used to attack the enemy as they were fleeing. Egyptian foot soldiers also carried shields, the size of which was determined by what weapons the enemy used. Shields as tall as a person were not easily maneuvered but served as excellent protection against arrows. Smaller shields provided a good defense against swords and axes. These new weapons helped the Egyptians defend their kingdom and conqueror new lands.

Iron came earlier to other parts of Africa. Archeologists long believed that the technology for smelting iron was brought to Africa from Asia, but **artifacts** uncovered by archeologists suggest that the technology was developed independently in eastern Niger in about 2500 B.C.E. African blacksmiths made iron tools, including broadswords, throwing knives, axes, adzes, spears, and hoes.

Much of the ironwork of ancient Africa is remarkably beautiful; today, knives and swords are often exhibited in art museums. It was common to make ceremonial weapons that were never intended to be used. So important was iron to Africa that many groups used iron objects as currency. In fact, hoe blades were often used as part of bride price, the gifts given to a bride's family before a wedding. Iron also symbolically represented the authority of kings and chiefs, who often controlled the sources of iron and the smelting furnaces.

In addition to iron weaponry and farm tools, African craftspeople also made elaborately decorated shields of wood, wicker, and the hides of such animals as elephant, buffalo, hippopotamus, rhinoceros, and giraffe. The Zande people of the western Sudan carried large shields made of wicker, behind which they carried up to four throwing knives. The patterns woven into the shields allowed warriors to recognize their comrades even in the dark. The Nguni of South Africa carried warrior-sized shields made of cowhide, interwoven with different colored strips of hide. The Dinka of the southern Sudan carried wooden objects that looked like bows but were actually used like shields to deflect attacks. Shields, like iron weapons, were objects that attested to the status of the owner and were prized by the warriors who carried them.

See also: Agriculture; Archeological Discoveries; Egypt; Technology and Inventions.

FURTHER READING

Ehret, Christopher. *The Civilizations of Africa*. Charlottesville: University Press of Virginia, 2002.

McNaughton, Patrick R. "The Throwing Knife in African History." *African Arts* 3, no. 2 (1970).

Oliver, Roland, and Brian M. Fagan. *Africa in the Iron Age: c. 500 BC–1400 AD*. Cambridge: Cambridge University Press, 1975.

Yoruba

A people who today live primarily in southwestern Nigeria and who founded a number of ancient forest kingdoms, including the Oyo and Ife. In fact, ancient Yorubaland was divided into more than 25 city-states. **Archeologists** believe that the Yoruba have lived in this part of Africa since prehistoric times. Many of the slaves who were captured and brought to the Americas were Yoruba; as a result, evidence of Yoruba culture and traditions can still be found in modern Brazil, Trinidad, Cuba, and Haiti, particularly in the religion known as Santería.

The Yoruba believe that the world began in Ife, a city that they still regard as sacred and that is to this day a major center of Yoruba culture. Their creation myth tells how the creator, Olodumare, dispatched his son, Olduduwa, to earth carrying a lump of soil, pieces of iron, and a chicken. It was in Ife that Olduduwa placed the iron, which he then covered with soil, and allowed the chicken to scatter the soil to create farmland. From Ife, the Yoruba believe, the sons of Olduduwa went forth to found all the other kingdoms of the earth.

It is not surprising that the Yoruba believe they were present at the creation, for they are an ancient people. **Linguists** have noted that the language of the Yoruba became distinct from that of their neighbors more than 5,000 years ago, and there is evidence that the Yoruba had iron tools more than 2,000 years ago, making them among the first people on the African continent to learn to work with iron. The city of Ife has been occupied for more than 1,400 years; in fact, it is among the oldest cities in the forestland of west Africa.

The Yoruba have long been an urban people. Typically, they lived in cities surrounded on all sides by farmland. Because the land occupied by the Yoruba was densely forested, they had to be able to fell large trees to claim the land for agriculture, a task for which iron tools would have been necessary. In addition to ironworking and agriculture, the Yoruba were masters at working in terra-cotta and bronze. The Nok terra-cottas, huge clay heads that were sculpted between 500 to 200 B.C.E., were probably made by ancestors of the Yoruba, and the tradition of making huge heads continued for hundreds of years. Craftsmen of Ife made lifelike and sometimes life-sized heads of both terra-cotta and bronze from the twelfth through the fourteenth century C.E. Archeologists believe that the heads represent dead kings, or *oni*. Many of the faces are decorated with vertical lines, perhaps representing **ritual** scarification. Many of the heads wear beaded crowns and beaded necklaces.

By the seventeenth century C.E., the kingdom of Oyo came to dominate all of Yorubaland. Oyo had

LINK IN TIME

Santería

Santería, or La Regla Lucimi, is a belief system that arose in Cuba from an intermingling of Catholic and ancient native Yoruba beliefs. Thus, Santería is a syncretic religion. "Syncretic" refers to anything that is created from the melding of disparate elements.

When slaves were brought to the Caribbean in the sixteenth and seventeenth centuries C.E., many were nominally converted to Catholicism. However, the newly converted did not abandon the belief system they brought with them and developed a new religion that combined elements of both native beliefs and Catholicism. African elements in Santería include *orisha*, beings who represent aspects of the creator, Olodumare, who, the Yoruba believe, remains aloof from the daily life of humans. Orisha also represent and are represented by various aspects of nature; one may see manifestations of Orisha in rivers, stones, or lightning. They are similar to saints or guardian angels in the Christian belief system, but are less remote than angels and saints, and more directly involved in everyday existence. When slaves had to hide their real religious beliefs from their masters, they continued to worship the Orisha in the guise of Christian saints. In fact the term "Santería" was first used by the Spanish to describe the religion of the slaves, and it was intended as derogatory. "Santería" refers to what the Spanish saw as excessive devotion to the saints, not realizing that the people were actually devoted to the Orisha.

Another African aspect of Santería as it is practiced today is animal sacrifice. Over the past half century, many Cuban immigrants have brought Santería with them into American cities, and many who do not share their beliefs are offended by the killing of animals. However, adherents of Santería point out that the priests are trained in humane methods of sacrifice—and the victims are most frequently chickens, who are then cooked and eaten as part of the **ritual**.

Another important African influence in Santería can be seen in trance possessions. Drumming and wild dancing help adherents of Santería fall into deep trances, during which time they communicate with and seek guidance from deities and ancestors.

Because Santería seems strange and mysterious to many people, it is often portrayed on television and movies as bloody and terrifying, and it is linked in many people's minds to witchcraft, voodoo, and Satanism. But, in fact, the guiding principle of Santería, *ashe*, is a force for energy, growth, and harmony

an advantage over other Yoruba city-states because they imported horses from the north and used them to dominate their neighbors. Oyo merchants traded extensively with Europeans and, sadly, sold people from conquered neighboring city-states in return for cloth and other goods. Between 1680 and 1730, Oyo sold 20,000 people into bondage each year. Ironically, Oyo collapsed after the British ended the slave trade in 1807. Because the British were no longer trading in slaves, the price of a slave became so low that anyone could own one. This led to a huge enslaved population. In 1823 Afonja, a military commander, fomented a successful revolution in Oyo by recruiting slaves to his cause. After the revolution, Oyo collapsed and all of Yorubaland was plunged into long and violent warfare.

See also: Agriculture; Benin; Myths and Epics; Nok People; Religion; Technology and Inventions; Tools and Weapons.

FURTHER READING

Falola, Toyin. *Orisa: Yoruba Gods and Spiritual Identity in Africa and the Diaspora*. Lawrenceville, NJ: Africa World Press, 2006.

Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationships A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretation/analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history of science and technology Study of the evolution of scientific discoveries and technological advancements

history, cultural An analysis of history in terms of a people's culture, or way of life, including patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political an analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remains consistent or shows marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radio-carbon dating A test for determining the approximate age of an object or artifact by measuring that object's number of carbon 14 atoms

social history See history, social

Key Terms Found in A to Z Entries

antiquity The ancient past, particularly referring to the history of the Western world before the fall of the Roman Empire in C.E. 476

archeologist A scientist who studies prehistoric peoples and their cultures

aristocratic class The governing group of a society in which the status is usually inherited

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament

artisan A skilled craftsperson or worker who practices a trade or handicraft

bureaucracy A form of government that is characterized by standard procedures, formal division of responsibility, and relatively impersonal relationships

caucasoid A term used to describe the race of humans from Europe, North Africa, and the Middle East

cognate A word that is related to or shares a similar origin with another word; the English word *milk* and the German word *milch* are cognates

Coptic The language of the Copts, an Afro-Asiatic people, which is used today as the language of the Coptic Church

cross-cousin marriage A marriage between first cousins; while cross-cousin marriage is forbidden in some cultures, some African cultures encourage the practice

cuneiform Literally "wedge-shaped"; refers to the wedge-shaped writing of the Sumerians, Assyrians, Persians, and other Middle Eastern people

demotic A simplified form of Egyptian hieroglyphics

doctrine A set of principles presented for acceptance or belief, such as by a religious, political, or philosophical group

effigy A representation of a person or animal; often a crude image of a despised person

equinox Literally "equal night"; an astronomical term referring to the two days each year in which daylight and darkness are approximately equal; usually March 21 (spring equinox) and September 21 (autumnal equinox)

excavation Literally "digging"; the primary technique used by archeologists to uncover evidence of prehistoric or ancient life

genetics The study of the biology of heredity, the qualities passed from one organism to another through reproduction

glyph A symbol that represents a word or a sound in a written language

hieratic A cursive form of Egyptian hieroglyphs

hieroglyph A pictorial symbol used to express a word or sound; refers primarily to Egyptian writing but is also used to refer to the Mayan and Aztec writing systems

ideogram A symbol representing an object, such as the abstract pictures of men and women that identify restrooms

inscription Writing carved or engraved on a surface such as a coin, tablet, or stone monument

linguist A person who studies human speech, especially a particular language or means of communication

material culture Term used by archeologists to refer to the objects used by a particular group of people, including tools, weaponry, jewelry, houses, and items for burial practices

matriarchal A type of society ruled by female leaders

matrilineal A social system in which descent is traced through the mother's line

megalith A large structure made of stone; term used particularly to describe enormous circles, tombs, and other stone constructions of Bronze Age Europe

Mesoamerica A region extending from Central Mexico to Costa Rica that was home to several great pre-Colombian civilizations

microlithic Literally "small stones"; describes small tools made by early humans

mitochondrial DNA A form of DNA found outside the nucleus of the cell; mitochondrial DNA does not change much from parent to offspring and can be used by scientists to trace relationships back hundreds of generations

monarchy Form of government in which a state is headed by a single hereditary ruler

monotheistic Referring to belief in a single deity

oracle A shrine, or religious figure serving at that shrine, consulted for religious purposes, particularly for giving advice or foretelling the future

Paleolithic Period Also called the "Old Stone" Age, from the Greek, the period in human development from about 450,000 to 10,000 B.C.E., beginning with the use of the earliest stone tools and ending with the adoption of the bow and flint tools; historians further classify the era as the Lower Paleolithic Period (about 450,000 to 100,000 B.C.E. to 100,000 B.C.E.; Middle Paleolithic Period (100,000 to 40,000 B.C.E.); and Upper Paleolithic Perod (40,000 to 10,000 B.C.E)

pantheistic Believing in a supreme creator whose presence is everywhere

pantheon All the gods of a people, or a temple dedicated to all the gods of a people

papyrus Paper made from reeds; invented by the Egyptians

patriarchal A type of society ruled by male leaders, where men typically possess primary religious, political, and domestic authority

patrilineal A social system in which descent is traced through the father's line

petroglyph (see also: **glyphs**) A symbolic figure engraved or painted on a stone surface

phonogram A written symbol that stands for a sound; the letters of the English alphabet are phonograms

physiological Pertaining to the science of the function of living organisms

pictogram A picture standing for whole words, part of the syllabary system of writing

pictograph A pictorial representation of a word or idea

polygamous referring to a social arrangement in which a person may take more than one spouse

polytheistic Referring to belief in a number of deities who are often representations of natural forces, such as the rain or the wind

primitive Pertaining to an earlier, simpler state; may particularly refer to early stages in the development of human culture before the development of writing

relief A type of sculpture where raised figures project partially from a flat surface, giving the appearance of dimension

republic Political system in which the head of state is not a monarch and in which the supreme power lies in a body of citizens who are entitled to vote for representatives responsible to them

ritual An act or procedure following a set order or form; often contains a ceremonial or religious importance

scribe An ancient profession; someone who could read and write, in a time when most people could not

shaman Sometimes referred to as a "medicine man"; someone who acts as a link between the material and spiritual world

solstice An astronomical term referring to days when the earth is at the nearest and farthest distance from the sun; usually June 21 (summer solstice) and December 21 (winter solstice)

subjugation Condition in which one person or group is made subservient or obedient to another person or group

syllabary A writing system consisting of symbols representing vowels and consonants, as well as logograms or pictograms that stand for whole words

textiles Items made of cloth or fabric, or the fibers used to weave a fabric

tribal Referring to groups of indigenous people, especially among preliterate people, who formed a close community

tribute A payment from one nation or group to another, usually to acknowledge submission

utilitarian Having a useful function

Selected Bibliography

Africa's Glorious Legacy. Alexandria, VA: Time-Life Books, 1994.

"African Archaeology." Accessed 20 Dec 2006. http://www.utexas.edu/courses/wilson/ant304/projects/projects97/weimanp/weimanp.html.

Agnese, Giorgio, and Maurizio Re. *Ancient Egypt: Art and Archaeology of the Land of the Pharaohs*. New York: Barnes and Noble, 2004.

Allen, James P. *Egyptian Art in the Age of the Pyramids*. New York: Metropolitan Museum of Art, 1999.

"Australopithicus afarensis: The story of Lucy." Accessed 20 Dec 2006. http://www.wsu.edu:8001/vwsu/gened/learn-modules/top_longfor/timeline/afarensis/afarensis-a.html.

Bacquart, Jean-Baptiste. *The Tribal Arts of Africa*. London: Thames and Hudson, 2002.

Bagnall, Nigel. *The Punic Wars: Rome, Carthage, and the Struggle for the Mediterranean*. New York: Thomas Dunne Books, 2005.

Bangs, Richard, and Pasquale Scaturro. *Mystery of the Nile: The Epic Story of the First Descent of the World's Deadliest River*. New York: Putnam, 2005.

Boardman, John. *The Greeks Overseas: The Early Colonies and Trade*. London: Thames and Hudson, 1999.

Brett, Michael, and Elizabeth Fentress. *The Berber (The People of Africa)*. Oxford: Blackwell, 1997.

Brooks, Miguel F. *A Modern Translation of the Kebra Nagast (The Glory of Kings)*. Trenton, NJ: Red Sea Press, 1996.

Budge, E.A. Wallis. *Egyptian Language: Lessons in Egyptian Hieroglyphics*. Rev. ed. New York: Barnes and Noble, 1993.

Burckhardt, Jacob. *History of Greek Culture*. London: Dover, 2002.

Burgoyne, Thomas H. *The Light of Egypt or Science of the Soul and the Stars*. Kila, MT: Kessinger, 2003.

Burl, Aubrey. *A Guide to the Stone Circles of Britain, Ireland, and Brittany*. New Haven, CT: Yale University Press, 2005.

Burride, Alwyn, "Did Akhenaten Suffer from Marfan's Syndrome?" *Biblical Archaeologist* 59, no. 2 (1996): 127–128.

Burstein, Stanley Mayer. *The Reign of Cleopatra*. Westport, CT: Greenwood, 2004.

Burstein, Stanley Mayer, ed. *Ancient African Civilizations: Kush and Axum*. Princeton, NJ: Wiener, 1998.

Church, Alfred J. *The Story of Carthage*. Rev. ed. New York: Biblio and Tannen, 1998.

Clapp, Nicholas. *Through the Desert in Search of the Legendary Queen*. New York: Mariner Books, 2002.

Collins, Robert O. *The Nile*. New Haven, CT: Yale University Press, 2002.

Connah, Graham. *Forgotten Africa: An Introduction to Its Archaeology*. London: Routledge, 2004.

Conrad, David C. *Empires of Medieval West Africa: Ghana, Mali, and Songhay*. New York: Facts On File, 2005.

"Creation and Death Myths." Accessed 20 Dec 2006. http://www.yale.edu/ynhit/curriculum/units/1998/2/98.02.03.x.html.

DeGrunne, Bernard. *The Birth of Art in Africa: Nok Statuary in Nigeria*. New York: Vilo International, 1999.

De Villiers, Marz, and Sheila Hirtle. *Into Africa: A Journey through the Ancient Empires*. Toronto: Key Porter Books, 1999.

Dewey, William J., and Allen F. Roberts. "Iron, Master of Them All." Accessed 20 Dec 2006. http://sdrc.lib.uiowa.edu/ceras/iron/.

Di Vita, Antonio, et al. *Libya: The Lost Cities of the Roman Empire*. New York: Konemann, 1999.

Dunn, Ross E. *The Adventures of Ibn Battuta: A Muslim Traveller of the Fourteenth Century*. Berkeley: University of California Press, 1990.

Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.

Elleh, Nnamdi. *African Architecture: Evolution and Transformation*. New York: McGraw Hill, 1996.

Empereur, Jean-Yves, and Stephane Compoint. *Alexandria Rediscovered*. New York: George Braziller, 1998.

"The Evidence: Hominid Fossils." Accessed 20 Dec 2006. http://www.utexas.edu/courses/wilsn/ant304.projects/projects97/weimanp/Fossils.html.

Fagg, Bernard. *Nok Terracottas*. London: Ethnographia Books, 2000.

Garlake, Peter. *Life at Great Zimbabwe*. Zimbabwe: Mambo Press, 1983.

Goodman, Jane E. *Berber Culture on the World Stage: From Village to Video*. Bloomington: Indiana University Press, 2005.

Goucher, Candice, et al. *In the Balance: Themes in World History*. Boston: McGraw-Hill, 1998.

Greene, Jacqueline Dembar. *Slavery in Ancient Egypt and Mesopotamia*. New York: Watts, 2000.

Hall, Martin, and Rebecca Stefoff. *Great Zimbabwe*. New York: Oxford University Press, 2006.

Hamdun, Said, Noel King, and Ross E. Dunn. *Ibn Battuta in Black Africa*. Princeton, NJ: Wiener, 2005.

Harris, Joseph E. *Africans and Their History*. Rev. ed. New York: Penguin, 1998.

Hill, Matthew H. "The Senegambian Monument Complex: Current Status and Prospects for Research." In *Megaliths to Medicine Wheels: Boulder Structures in Archaeology*, Michael Wilson et al., eds., pp. 419–430. Calgary: University of Calgary Archeological Association, 1981.

Hilton, Anne. *The Kingdom of Kongo*. Oxford: Clarendon, 1985.

"History of Alexandria." Accessed 20 Dec 2006. http://ce.eng.usf.edu/pharos/alexandria/history/ roman.html.

"In Search of Myths and Heroes: The Queen of Sheba." Accessed 20 Dec 2006. http://www.bbc.co.uk/history/ancient/sheba_print.html.

Isichei, Elizabeth. *A History of African Societies to 1870*. Cambridge: Cambridge University Press, 1997.

Jordan, Manuel. *The Kongo Kingdom*. New York: Watts, 1999.

Kryza, Frank T. *The Race for Timbuktu: In Search of Africa's City of Gold*. New York: Ecco, 2006.

Kurlansky, Mark. *Salt: A World History*. New York: Penguin, 2002.

"Kush, Meroe, and Nubia." Accessed 20 Dec 2006. http://www.shsu.edu/~his_ncp/Sudan.html.

Leakey, Mary D. *Olduvai Gorge: My Search for Early Man*. New York: Collins, 1979.

Lovejoy, Paul E., et al. *Transformations in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 2000.

Ma'At-Ka-Re Monges, Mariam. *Kush: The Jewel of Nubia: Reconnecting the Root System of African Civilization*. Trenton, NJ: African World Press, 1997.

Mbiti, John S. *African Religions and Philosophy*. 2nd ed. Portsmouth, NH: Heinemann, 1992.

———. *Introduction to African Religion*. Portsmouth, NH: Heinemann, 1991.

McCarthy, Cara, et al. *Masks: Faces of Culture*. New York: Abrams, 1999.

McKissack, Patricia, and Frederick McKissack. *The Royal Kingdoms of Ghana, Mali, and Songhay*. New York: Holt, 1995.

McNaughton, Patrick R. "The Throwing Knife in African History." *African Arts* 3, no. 2 (1970).

Morell, Virginia. *Ancestral Passions: The Leakey Family and the Quest for Humankind's Beginnings*. New York: Touchstone, 1996.

Mulokozi, M.M. *The African Epic Controversy*. East Lansing: Michigan State University Press, 2002.

"Mystery of Great Zimbabwe." Accessed 20 Dec 2006. http://www.pbs.org/wgbh/nova/israel/zimbabwe.html.

Nesse, Randolph. "The Evolution of Commitment and the Origins of Religion." *Science and Spirit* 10, no. 2 (August 1999): 32–33, 46.

"Nubia." Accessed 20 Dec 2006. http://www.bbc.co.uk/worldservice/africa/features/storyofafrica/3chapter4.shmtl.

Nurse, Derek. *Bantu Languages*. London: Routledge Curzon, 2003.

Nurse, Derek, and Thomas Spear. *The Swahili: Reconstructing the History and Language of an African Society 800–1500*. Philadelphia: University of Pennsylvania Press, 1985.

O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University of Pennsylvania Press, 1994.

Okafor, Clement A. "Oral Tradition and Civic Education in Africa." *International Education Journal* 5, no. 3 (2004).

Oliver, Roland, and Brian M. Fagan. *Africa in the Iron Age: c. 500 BC–1400 AD*. Cambridge: Cambridge University Press, 1975.

Payne, Elizabeth. *The Pharaohs of Ancient Egypt*. New York: Random House, 1981.

Phillipson, David W. *African Archeology*. Cambridge: Cambridge University Press, 1985.

Price, T. Douglas, and Gary M. Feinman. *Images of the Past*. London: Mayfield, 1997.

Quigley, Mary. *Ancient West African Kingdoms: Ghana, Mali, and Songhai*. Portsmouth, NH: Heinemann, 2002.

Raffaele, Paul. "Born into Bondage." *Smithsonian*, Sept. 2005, 64–73.

Ray, Benjamin C. *African Religions: Symbol, Ritual, and Community*. New York: Prentice Hall, 1999.

Reader, John. *Africa: A Biography of the Continent*. New York: Knopf, 1998.

Richardson, Hazel. *Life in Ancient Africa*. New York: Crabtree, 2005.

Robins, Gay. *The Art of Ancient Egypt*. Cambridge, MA: Harvard University Press, 2000.

Rosellini, Ippolito. *The Monuments of Egypt and Nubia*. Cairo, Egypt: American University in Cairo Press, 2003.

Salm, Steven, and Toyin Falola. *Culture and Customs of Ghana*. Westport, CT: Greenwood Press, 2002.

Sattin, Anthony. *The Gates of Africa: Death, Discovery, and the Search for Timbuktu*. New York: St. Martin's Press, 2005.

Schwartz, Jeffrey H., and Ian Tattersall. *The Human Fossil Record*. Vol. 1, *Craniomorphology of Genus* Homo *(Africa and Asia)*. Hoboken, NJ: Wiley-Liss, 2003.

"The Senegambian Megalithic Monument Complex." Accessed 20 Dec 2006. http://www.science-frontiers.com/sf018/sf018p01.htm.

Sept, Jeanne. *Olduvai: Archaeology of Human Origins*. Bloomington: Indiana University Press, 1997.

Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.

Shinnie, Peter L. *Ancient Nubia*. London: Kegan Paul, 1996.

Silverman, David P., ed. *Ancient Egypt*. New York: Oxford University Press, 1997.

"Slave Kingdoms." Accessed 20 Dec 2006. http://www.pbs.org/wonders/Episodes/Epi3/3retel1.htm.

Snedegar, Keith. "Sub-Saharan Africa: Cultural Astronomy's Heart of Darkness." *Archaeoastronomy & Ethnoastronomy News* 32 (June 1999).

Solé, Robert, and Dominque Valbelle. *The Rosetta Stone: The Story of the Decoding of Hieroglyphics*. Translated by Steven Rendall. New York: Four Walls Eight Windows, 2002.

"The Story of Africa: BBC World Service." Accessed 20 Dec 2006. http://www.bbc.co.uk/worldservice/africa/storyofafrica/3generic1.shtml.

Thobhani, Akbarall. *Mansa Musa: Golden King of Ancient Mali*. Dubuque, IA: Kendall-Hunt, 1998.

"The Travels of Ibn Battuta" Accessed 20 Dec 2006. http://www.ucalgary.ca/applied_history/tutor/oldwrld/diplomats/battuta.html.

Vandewalle, Dirk. *A History of Modern Libya*. Cambridge: Cambridge University Press, 2006.

Warburton, Lois. *The Beginning of Writing*. San Diego: Lucent Books, 1990.

Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. Princeton, NJ: Wiener, 1998.

Wilkinson, John Gardner. *A Second Series of the Manners and Customs of the Ancient Egyptians, Including Their Religion, Agriculture: Volume 2*. Boston: Adamant, 1841, reprint, 2001.

Wilson, John. *The Culture of Ancient Egypt*. Chicago: University of Chicago Press, 1956.

Winks, Robin W., and Susan P. Mattern-Parkes. *The Ancient Mediterranean World: From the Stone Age to* A.D. *600*. Oxford: Oxford University Press, 2004.

"Yorba Religion and Myth." Accessed 20 Dec 2006. http://www.scholars.nus.edu.sg/landow/post/nigeria/yorubarel.html.

Index

Note: **bold** entries indicate glossary term; *t* indicates timeline; *m* indicates map; *p* indicates photo.

A

A-group, 73, 74*t*
A'as, Amr ibn al-, xv, 6, 7*t*, 61
Abolitionists, 23–24
Abu Simbel, 12
Actium, battle of, 6, 7*t*
Afonso I (Nzingu Mbemba), 49, 50, 51
Africa
  geography, xiii–xiv
  map of ancient, xviii*m*
Africa Vetus, 64
Afterlife, 33, 68, 79–80
Agriculture
  animism and, 7–8
  Bantu, 23
  Egypt, 1–2, 4, 92
  geographical regions and weather, 2–4
  innovations, 100–101
  society and, 4
  tools, 4, 106
  West Africa, 2
Ahmose, 36–37, 37*t*
Ail, Sunni, 95
Akan
  effigies, 82
  incest taboo, 34
  map, 31*m*
  matrilineal, 32
  myths, 68
Akhenaten (Amenhotep IV), 5, 37
Aksum. *See* Axum
Alexander the Great, 6, 7*t*, 37, 37*t*
Alexandria, xiv, 6–7, 37*t*, 102
Alexandria, Pharos of, 6, 7*t*, 100*t*, 102
Alfonso VI, 27
Alfonso XI, 27
Ali, Sunni, 95, 103
Almohads, 27, 61
Almoravides, 26–27, 40–41
Alvaro I and II, 50, 51
Amarna art, 5
Amen-Ra, 80
Amenemhat III, 36
Amenhotep IV. *See* Akhenaten
Ancestor figures, 18
Ancestral spirits, 82
Andalus, al-, 26
Animals
  depicted in art, 14
  domestication, 2
  extinct, 77
  sacrifice of, 109
  taboos against killing/eating, 34
  totem, 34
Animism, 7–8, 82
Ankh, 79
Antonio I, 51
Antony, Marc, 38
Archeoastronomers, 96
Archeological discoveries, 8–13, 10*m*
  Egyptian and Nubian, 12–13
  Lucy, 9*t*, 11, 77
  Olduvai Gorge, 76–77
  stolen, 13
  sub-Saharan, 13
  Taung Child, 8–11
  timeline, 9*t*
  tools, 11–12
Archeology
  Bantu migration, 22
  salvage, 12
Architecture, 14–16
  Djingareyber Mosque, 15, 103, 103*p*, 104
  earliest, 76
  Kush, 51–52
  See also Art; Housing; Pyramids; specific country/region/tribe
Ardipithecus ramidus, 9*t*
Aristocratic class, 92, 112
Ark of the Covenant, 89
Art
  Amarna, 5
  Bantu, 23
  Benin, 23, 25
  earliest, 14
  Egyptian, 16
  Nok, 72
  sub-Saharan, 16–17
  utilitarian, 14
  See also Architecture; Engravings; Figures; Masks; Paintings; Pottery; Sculptures
Artifacts, xv, 8, 56, 112
  Axumite, 19–20
  Bantu migration, 22
  Egyptian and Nubian, 12–13
  Egyptian found in Nubian tombs, 73, 80
  Great Zimbabwe, 43
  Nok, 71
  paleobiology, 77–78
  rescue archeology, 12
  stolen, 13
Artificial limbs, 99*p*
Artisans, 14, 112
  Benin, 25
  Nok, 72
  social status, 93
Ashanti, 40
  animal taboos, 34
  chiefdoms, 92
  deities, 7–8
  tricksters, 68
Askiya Dynasty, 95, 103
Astronomy, 97, 101
Aswan High Dam, 12
Aten, 5
Atlas Mountains, 18–19
Australopithecus afarensis, 11
Australopithecus boise, 76
Axum, 19–20, 58, 81

B

B-group, 73
Ba, 79–80
Baganda, 31*m*, 32, 82
Bakar, Abu, 62
Bambara, 31*m*, 34
Band societies, 90
Bantu migration, 21–23
Baru, Sunni, 95, 103
Battles
  Actium, 6, 7*t*
  Mbwila, 51
  Thapsus, 65
  See also Wars
Battuta, Ibn, 48–49, 86–87
Beehive, the, 44*p*
Benin, 23–25
Bent, Theodore, 43
Berbers, 18, 19, 25–27, 60
Bet Medhane Alem, 15
Beta Israel, 81
Bipedalism, 9, 11
Black market, 13
Bleek, Wilhelm, 21
Blemmyes, 74
Blombos Cave, 9*t*, 11, 14
Bocchus, 65
Boshongo, 67
Bouchard, Pierre, 56, 59*t*
Bräuer, Günter, xiii
Bride price, 32
Britain. *See* England
Bronze casting, 25
Bubalus Period, 14
Bureaucracy, xiv, 4, 54, 92, 95, 112
Burial customs, 33
  Dogon, 33*p*
  Egyptian, 33, 79–81
  Ibo, 33
  Kush (Nubian), 52
  masks, 34
  See also Afterlife; Funerary objects; Pyramids; Tombs
Burton, Richard, 71
Bwa, 31*m*

C

C-group, 73, 74*t*
Caesar, Augustus. *See* Octavian
Caesar, Julius, 38, 65
Caillé, René, 103
Calendars, 4, 101
Cameroon, 21
Canals, 100–101, 100*t*
Cão, Diogo, 49, 51
Carter, Howard, 12

Carthage, xiv, 28–29, 29*t*, 64–65
Cataract surgery, 100*t*
Catholicism, 51, 109
  See also Christianity
Cato, Marcus, 29, 29*t*
Caucasoid, 25, 112
Champollion, François, 56, 59*t*
Chariots, 106–107
Chiefdoms, 91–92
Children
  in Egypt, 93–94
  initiation rites, 33, 91*p*, 93
  naming, 32–33
  in **tribal** cultures, 92
China, xv–xvi
Christianity
  Egypt, 81
  Ethiopia, 19, 81
  growth of, 82
  Kongo, 49–51, 50*p*
  Nubia, 74, 74*t*
Circumcision, 15*p*, 33, 91*p*
Claudius, 65
Cleopatra, 6, 37, 37*t*, 38
Click languages, 54
Clocks, 100*t*, 101
Cognates, 59, 112
Colonialism, xvi
  British, 40, 43
  Greek, 45–47, 60
  Phoenician, 60
  Portuguese, 50, 66
  Roman, 37*t*, 61, 64–65
Coptic, 56, 57–58, 81, 112
Cosmic egg, 67
Creation myths, 66–67, 108
Cross-cousin marriages, 34, 112
Cultural history, 48, 111
Cuneiform, 54, 112
Customs, 32–33
  See also Mores; **Rituals**; Taboos
Cyrenaica, 60–61
Cyrene, xiv, 45–47

D
Dams, 100, 100*t*
Dart, Raymond, 8, 11
Death
  afterlife, 33, 68, 79–80
  See also Burial customs; Tombs
Deities
  earth, 7–8
  Egyptian, 53, 66, 70, 80
  Nubian, 53, 81
  sun, 5, 15, 66
  Yoruban, 66–67
  See also Religion
Democratic **Republic** of the Congo, 7, 21
Demotic, 56, 57, 59*t*, 101, 112
Desertification, 85
Diamond, Jared, xvi–xvii
Dido, 29*t*
Diogo I, 50
Djingareyber Mosque, 15, 103, 103*p*, 104
DNA analysis, xiii, 12, 113
Doctrine, 51, 112
Dogon
  art and architecture, 14, 15*p*
  astronomy, 97
  wooden masks, 33*p*
Dreyer, Günter, 59*t*
Drumming, 109
Dua, Nana Kwaku, 40

E
Early Dynastic Period (Egypt), 35, 37*t*
Earth deities, 7–8
Ebers Papyrus, 99
Economy, xvi–xvii
Edwin Smith Papyrus, 99
Effigies, 82, 112
Egg, cosmic, 67
Egypt, xiv
  agriculture, 1–2, 4, 92
  Alexandria, 6–7, 37*t*, 102
  archeological discoveries, 12–13
  art, 16
  burial customs, 33, 79–81
  culture, 31*m*
  Giza, 9*t*, 12, 42
  Kingdoms, 35, 37*t*
  law, 94
  medicine, 97–100
  myths, 66
  Nile River, 70
  Nubia and, 52–53, 73–74
  periodization, 35, 37–39
  pharaohs. *See* Pharaohs
  pyramids. *See* Pyramids
  religion, 4, 5, 79–81
  social structure, 30, 92–93
  taboos, 33–34
  technology and inventions, 4, 97–102
  tools and weapons, 106–107
  women and children in, 93–94
  writing and language, 54–58, 58*p*, 59*t*
El Mina. *See* Mina, El
Embalming, 99
England
  colonialism, 40, 43
  Rosetta Stone, 56
Engravings, 14
Environment
  Axumite demise and, 20
  desertification, 85
Epics, 62, 66, 68–69
  Kebra Negast, 81, 88–89
  See also Myths
Equiano, Olaudah, 23–24, 25, 90
Equinox, 96, 112
Ethiopia
  agriculture, 2
  Axum, 19–20, 58, 81
  epics, 81, 88–89
  fossils, 77
  religion, 81
Europe, colonial rule. *See* Colonialism
Ewuare, 24–25
Excavation, 73, 112
Extinction. *See* Animals

F
Family structure. *See* Social structure
Farming. *See* Agriculture
Fetish figures, 18, 50*p*
Fezzan, 60–61
Figures
  ancestor and fetish, 18
  Nkangi Kiditu crucifix, 50*p*
  Nok, 72, 72*p*
  See also Sculptures
Fire, royal, 66
Flood myths, 67
Food production, xvii, 4
Footprints, 11, 77
Fossils, 8–11, 76–77
Funerals. *See* Burial customs
Funerary objects
  Egypt, 33, 80
  grave **excavation**, 73
  Nubia, 33, 52
  See also Burial customs; Death

G
Gambia, 96
Garamantes, 60
Gebel Barkal, 13, 52
Ge'ez, 19, 58–59, 59*t*
Geneticists, xiii, 54, 77, 112
Geography, xiii–xiv
  progress and, xvi–xvii
Ghana, 39–41
  Akan. *See* Akan
  ancient *vs.* modern, 40
  Ashanti. *See* Ashanti
  map of ancient, 41*m*
  Songhai, 95*t*
Giraffes, depicted in art, 14
Giza, 9*t*, 12, 42
Glyphs, 54–55, 58*p*, 112
Gods. *See* Deities
Government
  Benin, 24–25
  Berber, 26
  Egypt, 54, 92
  Kongo empire, 49
  See also Social structure
Grave **excavation**. *See* Funerary objects
Gray, Tom, 77
Great Enclosure (Great Zimbabwe), 44

Great Mosque. *See* Djingareyber Mosque
Great pyramids. *See* Pyramids
Great Zimbabwe, xv–xvi
  architecture, 15, 44–45, 44*p*
  discovery of, 13, 43
  purpose of, 45
Greco-Roman Period (Egypt), 37–39, 37*t*
Greece, xiv
  colonialism, 37, 45–47, 60
  Sicilian Wars, 28
Greenberg, Joseph, 21
Guns, Germs, and Steel (Diamond), xvi–xvii
Guthrie, Malcolm, 21
Gynecology Papyrus, 99, 100*t*

H
Hadar, Ethiopia, 77
Hajj, 62, 64, 102
Hall, Richard Nicklin, 13, 43
Hannibal, 28–29, 29*t*
Hatshepsut, 39
Hawass, Zahi, 12
Heads, terra-cotta, 13, 17, 72, 108
Henshilwood, Christopher, 9*t*, 11
Hierarchical structure, 91
Hieratic, 57, 112
Hieroglyphs, 4, 12, 112
  Egyptian, 54–58, 101
  last use of, 59*t*
Hill Complex (Great Zimbabwe), 44
Historical inquiry, 74, 111
Historical research, 52, 111
Hominids, xiii, 9*t*, 77
Homo habilis, 9, 9*t*, 11, 76
Horemheb, 5
Housing, 14–15
  Berber, 26*p*
  See also Architecture
Humans
  fossilized, 76–77
  origin of, xiii, 77–78
Hyksos, 36–37, 37*t*

I
Ibo, 31*m*, 32–34
Ibrahim-es-Saheli, Abu-Ishaq, 104
Ice Age, Little, 84
Ideograms, 56, 112
Ife, 108
Incest, 33–34
Initiation rites, 33, 91*p*, 93
Inscriptions, 112
  earliest Egyptian, 59*t*
  Ge'ez, 59
  Rosetta Stone, 56
  tomb, 80
Iron working, 23, 97, 100*t*, 107
Islam, xv, 81–82
  Berbers and, 26
  Nubia, 74, 74*t*
  Timbuktu, 102–103
Israel, Ethiopian Jews, 81

J
Jews, Ethiopian, 81
João (Nzingu Kuwu), 49, 50, 51
Johanson, Donald, 9*t*, 11, 77
Juba I and II, 65
Jugurtha, 65

K
Ka, 80
Kahun Gynecology Papyrus, 99, 100*t*
Kashta, 52
Kebra Negast, 81, 88
Kendall, Timothy, 13
Khafre pyramid, 38*p*, 42
Khufu pyramid, 38*p*, 42
Kingdoms, Egyptian. *See* Egypt
Kings, religious status of, 82
Knives, throwing, 106
Kom Ombo temple, **reliefs**, 99, 100*t*
Kongo empire, 49–51
Kuba, masks, 17*p*
Kufuor, John Agyekum, 40
Kush, 51–53, 73–74
Kuwu, Nzingu. *See* João

L
Laetoli, Tanzania, 77
Lakota, 93
Language
  Axumite, 19
  Bantu, 21
  Berber, 25
  click, 54
  learning from ancient, 59–60
  linguistic groups, 55*m*
  Meröe, 53
  time line, 59*t*
  vowels, 59, 59*t*
  See also Writing
Late Period (Egypt), 37, 37*t*
Law
  Egypt, 94
  tribal cultures, 92
Leakey, Jonathan, 76
Leakey, Louis, xiii, 9, 9*t*, 11, 76
Leakey, Mary, xiii, 9, 9*t*, 11, 76–77
Leakey, Richard, 9
Leptus Minor, 9*t*
Life after death. *See* Afterlife
Lighthouse. *See* Pharos of Alexandria
Limbs, artificial, 99*p*
Linguistics, xiii, 21–22
Linguists, 12, 21, 59, 112
Lion King, The, 68–69
Little **Ice Age**, 84
Lock and key system, 100*t*, 101
Lucy, 9*t*, 11, 77
Lybia, 45–46, 60–61

M
Ma'at, 79, 94
Makeda. *See* Sheba, Queen of
Mali, 62–63, 95
  Dogon of, 14, 15*p*, 33*p*, 97
  epics, 68
  Timbuktu, 102–103
Mamertines, 28
Mandé, myths, 67
Mansa Musa. *See* Musa, Kankan
Mansur, Ahmad al-, 95, 103
Maps
  Africa, xviii*m*
  archeological sites, 10*m*
  Bantu migration, 22*m*
  cultures, 31*m*
  Egypt during New Kingdom era, 36*m*
  Ghana, 41*m*
  Greek colonies, 46*m*
  linguistic groups, 55*m*
  salt trade, 87*m*
  spread of iron working, 98*m*
Marfan's syndrome, 5
Marinids, 27
Marriage
  bride price, 32
  cross-cousin, 34, 112
  incest and, 33–34
Masks, 18
  Dogon of Mali, 33*p*
  Kuba, 17*p*
  Tutankhamen, 12*p*
  use of, 34
Masmoda (Berber tribe), 26, 27
Massinissa, 65
Mastabas, 42
Material culture, 12, 113
Matriarchal, 23, 91, 113
Matrilineal, 23, 32, 113
Mauch, Carl, 43
Mauretania, 64–65
Mayans, pyramids, 16
Mbemba, Nzingu. *See* Afonso I
Mbwila, battle of, 51
Mecca, Musa's pilgrimage, 62–63, 64
Medicine, 97–100
Megaliths, 96, 113
Menelik, 19, 89
Menes, 35, 37*t*
Menkaure pyramid, 38*p*, 42
Mentuhotep, 36
Merkhet, 101
Meröe, 53, 58, 74
Merötic, 58
Mesoamerica, 16, 113
Metal smiths, 97
Middle Kingdom (Egyptian era), 36, 36*m*, 37*t*
Mina, El, xvi

Mitochondrial DNA. *See* **DNA** analysis
Monarchy, 4, 113
Monomutapa Empire, 23, 65–66
Monotheistic religion. *See* Religion
Moors, 26, 27
Mores, 32–33
Morocco, 18–19
Mosques, 15, 103, 103*p*, 104
Mountains, Atlas, 18–19
Mummification, 80
Munhumutapa. *See* Monomutapa Empire
Musa, Askiya, 95
Musa, Kankan, 62–64, 102–103
Music, Bantu, 23
Muslims, xv
Mutapa. *See* Monomutapa Empire
Myths, 66–67, 108
  See also Epics

N
Nabta Playa, 1
Nafi, Uqba bin, 61
Names, 32–33
Napata, 52–53, 73–74
Narmer, 35
Nebuchadnezzar, 28, 29*t*
New Kingdom (Egypt), 36–37, 37*t*
Nigeria
  agriculture, 2
  art, 17
  artifacts, 13
  Bantu migration, 21, 22*m*
  Ibo, 32–34
Nigeria *(continued)*
  Nok, 13, 17, 71–72, 72*p*, 108
  Yoruba. *See* Yoruba
Nile River, 70–71
Nile valley, agriculture, 1–2
Nkangi Kiditu crucifix, 50*p*
Nkrumah, Kwame, 40
Nobades, 74
Nok, 13, 17, 71–72, 72*p*, 108
Nomadic societies, 90–91
Nubia
  archeological discoveries, 12–13
  Blemmyes, 74
  cultures, 73
  Egyptian conquest, 73, 74*t*
  funerary objects, 33
  historical inquiry, 74–75
  Kush, 51–53, 73–74
  Nile River, 71
  Nobades, 74
  pyramids, 15
  religion, 74, 74*t*, 80–81
  rise of, 74*t*
  writing, 58
Number system, 101
Numidia, 65
Nuna, 31*m*, 34
Nutcracker man, 76
Nyanga, epics, 69
Nzingu Kuwu. *See* João
Nzingu Mbemba. *See* Afonso I

O
Obelisks, 101
  Axumite, 19–20
  Great Zimbabwe, 44
  Hatshepsut's, 39
Octavian, 6, 38
Oil, Morocco, 19
Old Kingdom (Egypt), 35, 37*t*
Oldupai. *See* Olduvai Gorge
Olduvai Gorge, 76–77
Oracle, 45, 94, 113
Orisha, 109
Osei Tutu, 40
Oyo, 108–109

P
Paintings
  earliest, 14
  Egyptian, 16
  Sheba and Solomon, 88*p*
  sub-Saharan, 16–17
  tomb, 80*p*
  See also Art
Paleobiology, 77–78
Paleolithic Period, 105, 113
Pantheism, 7, 113
Pantheon, 53, 80, 113
Paper. *See* **Papyrus**
Papyrus, 13, 15, 113
  harvesting, 70
  invention of, 56, 59, 59*t*, 101
  medical, 99, 100*t*
Pascal, Michael, 24
Patriarchal, 23, 113
Patrilineal, 32, 113
Patterns of continuity and change, 30, 111
Periodization, 35, 111
Persia, rule over Egypt, 37
Petrie, William Flinders, 12, 99
Petroglyphs, 14, 113
Pharaohs
  Akhenaten, 5, 37
  Amenemhat III, 36
  Horemheb, 5
  Khafre, 38*p*
  Menkaure, 38*p*
  Mentuhotep, 36
  Narmer, 35
  Nubian, 52
  Pepi I, 100
  religion and, 80
  role of, 94
  Tutankhamen, 5, 9*t*, 12*p*
Pharos of Alexandria, 6, 7*t*, 100*t*, 102
Phoenicia, xiv
Phoenicians, 28, 29*t*, 60
Phonograms, 56, 113
Piankhy. *See* Piye
Pictograms, 55–56, 113
Pictographs, 55, 113
Pilgrimages, Musa's, 62–63, 102
Piye, 52
Polygamy, xv, 113
  Ibo of Nigeria, 32
  Islam and, 82
  Kongo, 51
Polytheistic religion. *See* Religion
Portugal, xvi
  Kongo, 49, 50, 51
  Monomutapa, 66
Pottery
  Nok, 13, 17, 71, 72
  Yoruba, 108
Psammeticus I, 53
Ptolemy I Soter, 6, 7*t*, 37, 65
Puberty. *See* Initiation rites
Punic Wars, 28–29, 29*t*
Pyramids
  construction of, 101
  Egyptian, 15, 16
    Giza, 9*t*, 12, 42
    Khafre, 38*p*, 42
    Khufu, 38*p*, 42
    Menkaure, 38*p*, 42
  Mayan, 16
  Nubian, 15
  purpose of, 80
  social structure compared with, 92–93
  See also Tombs

Q
Queen of Sheba. *See* Sheba, Queen of

R
Ra, 66, 80
Radio-carbon dating, 14, 72, 111
Rameses II, 12
Randall-MacIver, David, 43
Regla Lucimi, 109
Reisner, George, 74
Reliefs, 16, 114
  Benin, 23, 25
  Kom Ombo temple, 99
Religion
  agriculture and, 4
  animism, 7–8, 82
  art and, 16
  Christianity. *See* Christianity
  Egypt, 4, 5, 79–81
  Ethiopia, 81
  Islam. *See* Islam
  monotheistic, 5, 79, 113
  Nubia, 80–81
  polytheistic, 5, 79, 113
  syncretic, 80, 109
  traditional African, 82
  See also Deities; **Rituals**
Rescue archeology, 12

Rhodes, Cecil, 43
Rhodesia, 43
Rites of passage. *See* Initiation rites
Rituals, 7, 82, 114
  animal sacrifice, 109
  circumcision, 15*p*, 33, 93
  initiation rites, 33, 91*p*, 93
  masks and, 18, 34
Robots, 12
Rock paintings. *See* Paintings
Rome, xiv, 6
  colonialism, 37, 61, 64–65
  Punic Wars, 28–29, 29*t*
Rosetta Stone, 56, 57*p*, 59*t*

S
Saba, 88
Sadd al Kafara, 100, 100*t*
Sahara, 84–85
Sahel, xiii, 85
Saloum, 96
Salt production, 86
Salt trade. *See* Trade
Salvage archeology, 12
San of Kalahari
  animism, 7
  band society, 90
  culture, 31*m*
  incest taboo, 34
  rock paintings, 14
Sanhaja (Berber tribe), 26
Sankore Mosque, 104
Sankore University, 103
Santería, 109
Savannahs, xiii
Scipio, 29, 29*t*, 65
Scribes, 56, 57, 93, 101, 114
Sculptures
  Bantu, 23
  Egyptian, 16
  sub-Saharan, 13, 17–18
  See also Art; Figures
Seele, Keith, 74
Sennedjem, painting from tomb of, 80*p*
Seven Wonders
  Great Pyramid of Khufu, 38*p*, 42
  Pharos of Alexandria, 6, 7*t*, 100*t*, 102
Seychelles, xiii
Shamans, 14, 114
Sheba, Queen of, 19, 81, 88–89, 88*p*
Shields, 107
Sicilian Wars, 28
Sidi Yahia Mosque, 104
Sin myths, 68
Skeletons. *See* Humans, fossilized
Slave trade, xvi, 89–90
  abolitionists, 23–24
  Benin, 25
  Kongo, 50, 51
  Yoruba, 109
Smenkhkare, 5
Smith Papyrus, 99, 100*t*
Social history, 48, 111
Social structure
  Bantu, 23
  early, 90–92
  Egyptian, 92–93
  family, 30–31
  Kush, 52
  See also Government
Solomon, 19, 81, 88–89, 88*p*
Solstice, 96, 114
Songhai empire, 94–95
Soul, 68, 79–80
Speke, John, 71
Sphinx, 42
Spirits
  after death, 33
  ancestral, 82
State, emergence of, 92
Statues, Akhenaten, 5
Steindorff, George, 74
Stelae, Axumite, 19–20
Sterkfontein Caves, 9*t*, 77
Stone circles, 96
Stone tools, 104–105
Stories. *See* Epics; Myths
Sub-Sahara
  archeological discoveries, 13
  art, 16–17
  technology and inventions, 97
Subjugation, xvi, 114
Sumanguru, 62
Sumer, writing, 54, 59*t*
Sun deities, 5, 15, 66
Sundials, 100*t*, 101
Sundiata, 62
Surgical instruments, 99
Syllabary, 54, 114
Syncretism, 80, 109

T
Taboos, 33–34, 82
Taghaza, 86–87
Tanzania, fossils, 77
Tashfin, Ibn, 26
Taung Child, 8–11, 9*t*
Technological progress, xvi–xvii
Technology and inventions
  agricultural, 100–101
  calendars and clocks, 4, 101
  medicine, 97–100
  number system, 101
  papyrus. *See* **Papyrus**
  pyramids. *See* Pyramids
  sub-Saharan, 97
  timeline, 100*t*
  See also Tools
Temples
  Egyptian and Nubian, 13, 15, 52
  Kom Ombo, 99, 100*t*
Terra-cotta, 13, 17, 72, 108
Textiles, 49, 114
Thapsus, battle of, 65
Threshing, 2
Throwing knives, 106
Thutmose, 39
Timbuktu, 95, 102–104
Timekeeping. *See* Clocks
Toe, artificial, 99
Tombouctou. *See* Timbuktu
Tombs
  Sennedjem, 80*p*
  Tutankhamen, 12
  See also Burial customs; Funerary objects; Pyramids
Tools
  agricultural, 4, 106
  earliest known formal, 11–12, 97, 104–105
  metal, 106
  photo of, 105*p*
  See also Iron working; Technology and inventions; Weapons
Totem animals. *See* Animals
Touareg, 91, 102
Trade, xiv–xv
  Axum, 19
  Benin, 25
  Carthage, 28
  Ghana, 40
  illegal, 13
  Kongo, 49, 50
  Mali, 62
  Monomutapa, 66
  Nile River, 70
  salt, 85–87, 87*m*
  slave. *See* Slave trade
Traditions. *See* Customs
Trance paintings, 14
Trance possessions, 109
Tribal cultures, 90, 92, 114
Tribute, 49, 89, 114
Trickster stories. *See* Myths
Tripolitania, 60–61
Ture, Mohammed, 95, 103
Tutankhamen, 5, 9*t*, 12, 12*p*
Tutu, Osei, 40

U
Uganda, Baganda, 31*m*, 32
UKhahlamba-Drakensberg Park, 14
Umayyad family, xv
Utilitarian, 14, 57, 114

V
Valley Complex (Great Zimbabwe), 44
Vandals, 61
Vision quests, 93
Vizier, 93
Vowels, 59, 59*t*

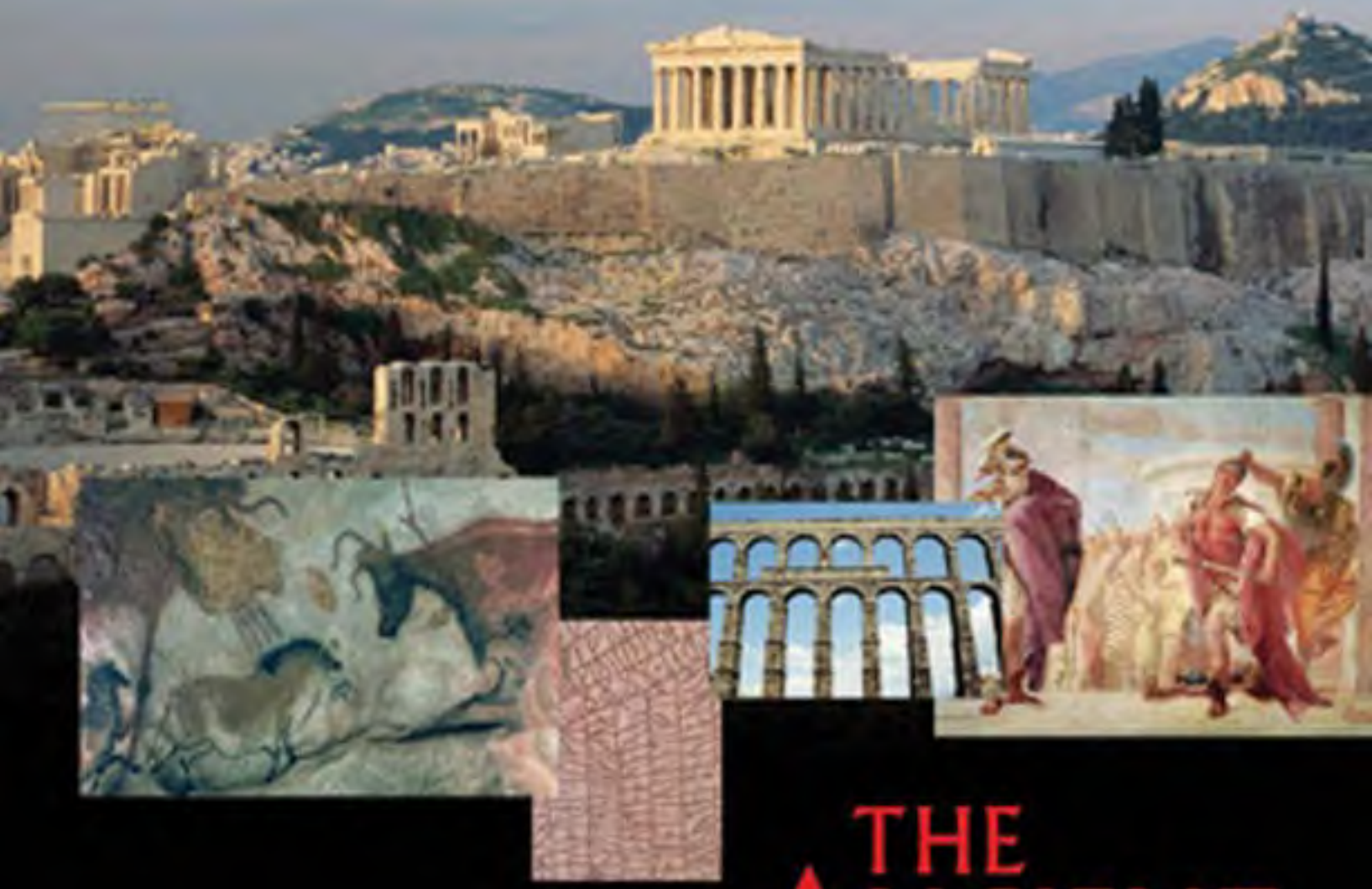
W
Wars
  Punic, 28–29, 29*t*
  Sicilian, 28
  See also Battles
Weapons, 106–107
White, Tim, 9*t*
Women
  in Egypt, 93–94
  Gynecology Papyrus, 99, 100*t*
  ruling
    Cleopatra, 6, 37, 37*t*, 38
    Hatshepsut, 39
  in sin myths, 68
  in tribal cultures, 92
Writing, 4
  Axumite, 19
  Egyptian, 54–58, 58*p*, 101
  emergence of, 54
  Ge'ez, 19, 58–59
  Merötic, 58
  timeline, 59*t*
  See also Language

X
Xhosa, 93

Y
Yoruba, 108–109
  customs and mores, 32–33
  inventions, 97
  map, 31*m*
  myths, 66, 67, 68, 108

Z
Zenata (Berber tribe), 26, 27
Zimbabwe, 43
Zimbabwe, Great. *See* Great Zimbabwe
Zinjanthropus, 76

Civilizations of Europe



The Ancient World

THE ANCIENT WORLD

CIVILIZATIONS OF EUROPE

Volume 2

The Ancient World

Civilizations of Europe

Volume 2

GENERAL EDITOR
Sarolta Takács, Ph.D.
Rutgers University

CONSULTING EDITOR
Eric Cline, Ph.D.
The George Washington University

SHARPE REFERENCE
an imprint of M. E. Sharpe, Inc.

DEVELOPED, DESIGNED, AND PRODUCED BY DWJ BOOKS LLC
Principal Author: Misty Urban

SHARPE REFERENCE
Sharpe Reference is an imprint of M.E. Sharpe, Inc.

M.E. Sharpe, Inc.
80 Business Park Drive
Armonk, NY 10504

© 2007 by M.E. Sharpe, Inc.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the copyright holders.

Library of Congress Cataloging-in-Publication Data
The ancient world / Sarolta Takács, general editor; Eric Cline, consulting editor.
p.cm.
Includes bibliographical references and index.
ISBN 978-0-7656-8082-2 (set : alk. paper)
1. Civilization, Ancient--Encyclopedias. 2. History, Ancient--Encyclopedias.
I. Takács, Sarolta A. II. Cline, Eric H.
CB311.A535 2007
930.103--dc22 2006101384

Printed and bound in Malaysia
The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials,
ANSI Z 39.48.1984

TI (c) 10 9 8 7 6 5 4 3 2 1

All images provided by Getty Images and the following:
background image: George Grigoriou/Stone
inset images (left to right): Bridgeman Art Library; Bengt Olof Olsson/Photonica; Gerard Mathieu/The Image Bank; Giovanni Battista Tiepolo/Bridgeman Art Library

Contents

List of Illustrations vii

Topic Finder ix

Preface xi

Crossroads of Culture xiii

Map of Ancient Europe xvi

Agriculture 1
LINK TO PLACE: *Lunar Calendars in Europe and in Asia* 3

Alexander III, the Great (356–323 B.C.E.) 4
LINK TO PLACE: *The Spread of Hellenistic Culture* 5

Archeological Discoveries 6
TURNING POINT: *Loughcrew* 9

Aristotle (384–322 B.C.E.) 13
GREAT LIVES: *Plato* 13

Art and Architecture 14
LINK TO PLACE: *Classic Columns: Ancient Greece and the United States* 17

Caesar, Gaius Julius (100–44 B.C.E.) 19

Cave Paintings 20
LINK IN TIME: *Lascaux: Then and Now* 22

Celts 23

Christianity 26

Crete 28

Cro-Magnon Peoples 29

Culture and Traditions 30
LINK IN TIME: *Celtic Samhain and Halloween Today* 34

Druids 36

Etruscan Civilization 37
GREAT LIVES: *Tarquin* 39

Franks 40

Gauls 42
GREAT LIVES: *Hannibal* 43

Germanic Groups 43

Greece 47
TURNING POINT: *Democracy in Athens* 48

Huns 50

Ice Age 51

Justinian I (C.E. 483–565) 53

Kievan Rus 54

Language and Writing 55
TURNING POINT: *The* Iliad *and the* Odyssey 58

Latin 60

Minoan Civilization 61
ANCIENT WEAPONS: *Metallurgy* 63

Myths, Epics, and Sagas 64
LINK TO PLACE: *Viking Sagas and the Norse Landing in North America* 68

Neanderthal Peoples 69

Norsemen 71
ANCIENT WEAPONS: *Longboats* 73

Odoacer (C.E. 435–493) 75

Pax Romana (27 B.C.E.–C.E. 180) 77
LINK IN TIME: Pax Romana *and* Pax Britannia 78
GREAT LIVES: *Hadrian* 79

Peloponnesian War (431–404 B.C.E.) 80
ANCIENT WEAPONS: *Hoplites* 82

Persian Wars (490–479 B.C.E.) 83
GREAT LIVES: *Herodotus* 85

Pompeii 86

Religion 88
GREAT LIVES: *Theodosius I, The Great* (C.E. 346–395) 92
TURNING POINT: *The Edict of Milan* 93

Rome 93
TURNING POINT: *Roman Law* 94

Slavery 97

Society 98
LINK TO PLACE: *Citizenship in Ancient Greece and in the United States Today* 100

Technology and Inventions 101
ANCIENT WEAPONS: *Chain Mail* 104
TURNING POINT: *The Roman Aqueduct* 106
GREAT LIVES: *Euclid* 107

Tools and Weapons 108
ANCIENT WEAPONS: *The Roman Chariot* 109

Trojan War 111

Glossary 113

Selected Bibliography 116

Index 123

List of Illustrations

Time Lines

Ancient World Time Line Endpapers

Archeological Discoveries 7

Development of Christianity, 4 B.C.E.–C.E. 1000 27

Germanic Groups and the Roman Empire 46

Evolution of European Language and Writing 57

Myths, Epics, and Sagas 65

Persian Wars, 490–479 B.C.E. 84

Religious Expression in Ancient Europe 89

Technology and Inventions 103

Maps

Map of Ancient Europe, ca. C.E. 300 xvi

Major Archeological Sites of Ancient Europe 8

Celtic Migrations 24

Major Cultural Areas of Ancient Europe 31

Migrations of Germanic Groups 44

Ice Age Peaks, ca. 20,000 B.C.E. 52

Major Linguistic Groups of Ancient Europe, ca. 2000 B.C.E. 56

Neanderthal Settlements 70

Paths of Norse Influence, 2000 B.C.E–C.E. 1000 72

Spread of Technology, ca. 6000 B.C.E–C.E. 75 102

Photos

Statue of goddess Ceres 2

Neanderthal skull 11

Roman mosaic 15

Paintings at Lascaux 21

Statue of Venus of Willendorf 32

Etruscan wall paintings 38

Tarquinus Sextus 40

Acropolis 49

Runic symbols 58

Fresco from palace at Knossos 62

Fresco of the *Iliad* 66

Dragon head post from Viking ship 73

Viking explorers 74

View of Pompeii with Vesuvius 86

Victims of Pompeii 87

Site of Oracle at Delphi 90

Roman Forum 95

Aqueduct 105

Ornamental bronze axe 110

Wood panel of Trojan horse 112

Topic Finder

Civilizations and Peoples
Celts
Cro-Magnon Peoples
Druids
Etruscan Civilization
Franks
Gauls
Germanic Groups
Greece
Huns
Kievan Rus
Minoan Civilization
Neanderthal Peoples
Norsemen
Rome

Culture and Language
Archeological Discoveries
Art and Architecture
Cave Paintings
Culture and Traditions
Language and Writing
Latin
Myths, Epics, and Sagas

General Topics
Agriculture
Archeological Discoveries
Art and Architecture
Culture and Traditions
Language and Writing
Myths, Epics, and Sagas
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

Notable Figures
Alexander III, the Great
Aristotle
Caesar, Julius
Euclid (*see* Technology and Inventions)
Hannibal (*see* Gauls)
Justinian
Odoacer
Plato (*see* Aristotle)

Places
Crete
Greece
Kievan Rus
Pompeii
Rome

Periods and Events
Archeological Discoveries
Ice Age
Pax Romana
Peloponnesian War
Persian Wars
Trojan War

Religion
Christianity
Druids
Religion

Society and Way of Life
Agriculture
Culture and Traditions
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

War and Military Affairs
Alexander III, the Great
Caesar, Julius
Justinian
Pax Romana
Peloponnesian War
Persian Wars
Tools and Weapons
Trojan War

Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality, have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

Crossroads of Culture

The history of ancient Europe is a story of cultural exchange facilitated by the continent's relatively compact size and the presence of a navigable waterway to the south—the Mediterranean Sea. Europe's proximity to Africa and Asia, and to the many vibrant cultures that developed on those continents, guaranteed that it would be a hub of cross-cultural contact. Seafaring coastal dwellers from Greece and Crete were the first to come into contact with foreign cultures in both trade and war. Also, interior cultures, such as the Germans and Celts, would take part in this process of exchange. In fact, contact between coastal powers and inland groups spread foreign influences throughout the continent.

These interactions resulted not only in commerce and trade in material goods but also in the exchange of ideas and customs. It is during this early period of outside contact, in the late second millennium B.C.E., that much of the seed for modern Western thought was sown. While two great civilizations—Greece and Rome—dominate much of the history of ancient Europe, the region was strongly influenced by cultural interchange between European and non-European societies. Europe was then, as it is today, a true crossroads of culture.

PREHISTORY

When the earliest ancestors of modern humans first arrived in Europe almost two million years ago, they found a landscape dramatically different from the one they left in Africa. The climate, however, was not entirely dissimilar to that of Africa. These circumstances changed as a series of ice ages, interrupted by periods of warming, caused major climatic shifts in Europe. It would not be until after the last ice age ended (about 10,000 years ago) that humans could make a permanent home on the continent.

The Land and Its People

While primitive hominids are believed to have arrived in Europe long ago, the earliest modern humans began to venture from Africa into Europe only during the last 100,000 years. It is difficult to say how far north these early migrations extended. The earliest human remains found in Europe were discovered in present-day Romania and date to only about 30,000 years ago. At about this time, the ice caps were receding, and small bands of humans began to disperse across the mountains and valleys that had been carved into the landscape by retreating glaciers.

Scholars know little about the earliest Europeans beyond the fact that they subsisted through hunting and gathering. Spear tips and arrowheads have been found throughout the continent, and cave paintings in France and Spain dating from 15,000 to 20,000 years ago depict wild animals. About 6,000 years ago, knowledge of agriculture spread to Europe from Asia Minor. Then, with the domestication of wild wheat and barley, humans began to move from a society based on hunting and gathering to one based on farming.

Languages

Most European languages derive from a single early form of speech brought west from the region of the Caucasus Mountains and known as Indo-European. The two most influential languages of ancient Europe, Greek and Latin, are both offshoots of Indo-European. Not all European languages, however, derive from Indo-European roots. Basque, Maltese, Turkic, and Finno-Ugric, to name a few, developed in relative isolation from the Indo-European family.

Language patterns in modern Europe reflect the enduring influence of the continent's ancient cultures. The Romance languages, such as Italian, French, Spanish, and Portuguese, are derived from Latin, the official language of the Roman Empire, which conquered all of those areas during its period of imperial expansion. In Central Europe, where Celts and Germans resisted Roman expansion, Germanic languages came to dominate. English, which borrows heavily from both Romance and Germanic languages, developed in Great Britain, a land ruled at various time by Celts, Romans, Germans, and the Norman French.

EARLIEST CIVILIZATIONS

The most influential civilizations of ancient Europe developed along the Mediterranean coast,

where constant contact with different cultures enabled the growth of wealthy and cosmopolitan trading cities such as Athens and Rome. In fact, the two greatest empires to develop during ancient times, those of Greece and Rome, achieved their preeminent status by dominating the seas.

The Minoans

The Mediterranean island of Crete, located at the crossroads of three continents—Africa, Asia, and Europe—was the site of Europe's first major civilization. Minoan Crete was a maritime trading power that controlled the Aegean Sea during the Bronze Age (ca. 3000–1500 B.C.E.), reaching the height of its power in about 1600 B.C.E. Modern archeological excavations of the Minoan palace of Knossos, for example, provide a glimpse of what must have been a bustling city with an elaborate system of sophisticated public works. Some scholars suggest that the eruption of a volcano on what is now the island of Santorini initiated the decline of Crete's power.

The Myceanaens and Dorians

By 1400 B.C.E., an Indo-European group called the Myceanaens, named for the Peloponnesian city of Myceanae, replaced the Minoans as the major political force in the Aegean. The language of the Myceanaens was an early form of Greek. Around 1100 B.C.E, a people from the northern and northeastern parts of Greece called Dorians toppled the Myceanaen civilization. Archeological data surrounding the Dorian invasion is scarce, and there is no written record of the region until the eighth century B.C.E., with the emergence of the early Greek alphabet.

Greece

The fall of the Myceanaens was followed by a period during which a number of individual Greek city-states grew up along the shores of the Aegean Sea. These early Greek societies introduced the precursors of Western literature, philosophy, and governance.

During the earliest era of Greek history, called the Archaic Period (ca. 800–500 B.C.E.), Greek city-states began to establish overseas colonies on the west coast of Asia Minor and around the Black Sea. Later Greek colonies also were established in Sicily and southern Italy, as far north as the Bay of Naples in Italy, and as far west as present-day Marseille, France. Territorial expansion spurred economic growth, which in turn stimulated political changes. Monarchy, or government by a single, absolute ruler, gave way to oligarchy—rule by a small elite class—and even to limited democracy, as in Athens.

The Classical Period (ca. 480–323 B.C.E.) was marked by external and internal conflict as well as by impressive economic and cultural progress. This era saw the flowering of Greek philosophy, poetry, mathematics, and history, which provided the foundation of Western culture. After the Greeks banded together to defeat a Persian invasion in the early fifth century B.C.E., Athens emerged as the leading Greek city-state. However, Athenian attempts to impose its will on the other city-states led to the Peloponnesian Wars and the defeat of Athens at the hand of its rival Sparta.

War between Athens and Sparta coincided with the emergence of a new power to the north, Macedonia. In the fourth century B.C.E., the Macedonian king Philip II (r. 359–336 B.C.E.), subdued the Greek city-states. His son, Alexander III, the Great (r. 336–323 B.C.E.), conquered the Persians and extended the Macedonian empire as far east as the Indus River. Although his empire dissolved shortly after his death, Alexander's military exploits established Greek as the universal language of the East, and the cities he founded throughout Asia formed the basis of a flourishing trade network.

Rome

Founded, according to tradition, in 753 B.C.E., Rome was only one of many small city-states in Iron Age Italy. At the time, the Etruscan civilization dominated the Italian peninsula. The Romans, who belonged to an Italic group called Latins, were subject to the authority of Etruscan rulers until the end of the sixth century B.C.E. After ousting their last Etruscan king, Tarquin the Proud (r. 535–509 B.C.E.), the Romans adopted a republican form of government.

By the third century B.C.E., Rome had expanded to bring all of Italy under its control. The integration of Greek colonies in southern Italy gave Rome access to Greek culture, which it eagerly adopted

and adapted to suit Roman tastes. The conquest of southern Italy also brought Rome in direct conflict with the major economic power of the time, the North African city-state of Carthage. Between 264 and 146 B.C.E., Rome and Carthage engaged in a series of conflicts known as the Punic Wars. The victorious Romans emerged as the most important military, economic, and political power of the Mediterranean basin.

Although its military was powerful, Rome was beset by political turmoil. As the republic weakened, influential military leaders vied for control of the state. When General Julius Caesar (r. 49–44 B.C.E.) assumed dictatorial powers, he was assassinated by his rivals. After a period of civil war, Caesar's great-nephew, Octavian (r. 27 B.C.E.–C.E. 14), emerged as the most powerful individual in Rome. Taking the name Augustus, Octavian assumed the title of emperor, thus returning the republic to its autocratic roots.

The next 200 years were a period of unparalleled peace and prosperity popularly called the *Pax Romana*, or Peace of Rome. By the third century C.E., however, invasions of migrating tribes, runaway inflation, and civil wars beset the Roman Empire. Despite the occasional strong ruler such as Constantine (r. C.E. 306–337), a long period of decline set in as weak and incompetent emperors were unable or unwilling to check the decay of Roman power. In the late third century C.E., the empire was divided into eastern and western halves. The western empire came to an end in C.E. 476 when Germanic invaders deposed the last Roman emperor. The eastern portion, based at Constantinople, survived for the next 1,000 years as the Byzantine Empire.

MODERN EUROPE: CONNECTIONS TO THE PAST

Europe's geographical proximity to Asia and Africa has continued to provide many of the same advantages and problems that it did for Athens and Rome. Immigrants from the neighboring continents—both those formerly under the sway of European colonial powers and those who never were—still make Europe a region of cultural and intellectual diversity and exchange. However, these influences not only enrich European culture. They also present challenges to it. Like the ancient Romans and Greeks before them, modern Europeans often feel threatened by the influx of foreign ideas from nearby lands. Even while expanding into new territories, the Greeks and Romans took pains to promote and maintain their own cultures. This process continues today, as descendents of the ancient Europeans discover for themselves Europe's ongoing position as a physical and symbolic crossroads of people and ideas.

FURTHER READING

Amos, H.D., and Land, G.P. *These Were the Greeks*. Chester Springs, PA: Dufour Editions, 1982.

Brown, P.L. *The World of Late Antiquity, AD 150–750*. New York: Norton, 1989.

Cunliffe, B., ed. *The Oxford Illustrated History of Prehistoric Europe*. New York: Oxford University Press, 1998.

Kebric, R.B. *Greek People*. Boston: McGraw Hill, 2004.

Kebric, R.B. *Roman People*. Boston: McGraw Hill, 2005.

Tingay, G.I.F., and Badcock, J. *These Were the Romans*. Chester Springs, PA: Dufour Editions, 1989

Sarolta A. Takács, Ph.D.
General Editor

Map of Ancient Europe

ANCIENT EUROPE, CA. C.E. 300

By the fourth century C.E., the Romans had built a mighty empire that reached from Hispania to Dacia and from Anatolia to Albion. After C.E. 476, the persistence of Celtic groups in the British Isles, the migration of Germanic groups from northern and central Europe, the excursions of Norse adventurers from Scandinavia, and the consolidation of Slavic kingdoms in eastern Europe in the centuries to follow helped establish the modern cultures of Europe on lands once occupied by prehistoric peoples.

Agriculture

In ancient times, methods of farming and raising animals for food initiated a change from the nomadic hunter-gatherer way of life to one centered around settled communities. In ancient Greece, the widespread use of agricultural practices, such as cultivating crops and raising animals began around 6000 B.C.E. and by 2500 B.C.E. had spread to the most northern and western parts of Europe.

As they adopted agriculture, tribes migrated to places with arable, or farmable, land, building permanent villages and, in some cases, defensive structures to protect their resources from wild animals or aggressive neighbors. Domesticating animals and plants afforded a stable means of food production that in turn supported population growth. In time, cities developed trade networks with one another, exchanging goods and information. Agriculture, in short, transformed human society in early Europe, prompting technological innovations such as the plow and the wheel, causing changes in political systems and leading to inventions such as weaving and the making of pottery. The story-telling and religious traditions of early European cultures frequently feature themes that indicate agriculture's crucial role in sustaining human life.

ORIGINS

In the development of prehistoric culture, knowledge of agriculture marks the transition from the **Mesolithic Period** to the **Neolithic Period**. The earliest inhabitants of Europe, including the Neanderthal and Cro-Magnon peoples, depended on hunting to provide meat as well as other materials for clothing, shelter, tools, and fuel sources. Gathering wild nuts, grains, roots, berries, seeds, and other vegetation also contributed to their diet. These hunting and gathering practices persisted throughout the Ice Age. After the last glaciers receded, between 12,000 and 10,000 B.C.E., gradual climactic changes in Europe eliminated many of the animals and plants that were once available as food. At the same time, improvements in tools and weapons for hunting might have helped deplete game, causing tribes to look to alternate food sources.

Agricultural practices first appeared in southern Europe around the Mediterranean Sea, introduced through contact with the peoples of the Near East. Starting around 8000 B.C.E., groups of people living in Mesopotamia began to migrate north through Anatolia (modern-day Turkey) to the Aegean Sea, bringing discoveries such as farming and animal domestication with them. On the Mediterranean island of Crete and parts of Greece, signs of agriculture appear definitively around 6000 B.C.E.

Scholars believe that the people of ancient Rome worshiped Ceres, the goddess of agriculture. As seen in this terra cotta sculpture, animals were sacrificed for her each spring during the festival of Ambarvalia to ensure fertility of the land. (Erich Lessing/Art Resource, NY)

Agriculture spread through Europe following two major routes. From the Balkans, farming methods spread along the Danube into the Rhine valley, extending from what is now Hungary and Bulgaria to Poland, Germany, and the Netherlands. A second route of transmission along the Mediterranean coast brought agriculture to Spain, France, and the British Isles. Between 6000 and 4500 B.C.E., permanent settlements emerged throughout Europe as many tribes gave up semi-nomadic lifestyles to tend fields.

Agriculture and Innovation

The farming tools of the Neolithic Period were simple. Using a stone axe called an adze, farmers could make hoes out of wood or sharpen digging sticks used to plant seeds. Stone knives or sickles helped with harvesting the crops. By 4000 B.C.E., wooden plows were in use to prepare soil for planting. Oxen or other draft animals harnessed to the plow helped make the farmer's task easier, particularly in the denser soils of northern Europe.

Other inventions accompanied the introduction of agriculture. The wheel first appeared in Europe during the Neolithic Period, used by potters to make clay jars and other food containers. Agriculture also spurred the invention of **textiles**, as people learned to weave flax and other fibers into fabric. The invention of spinning turned wool from sheep into yarn or thread, which could then be woven into clothing, blankets, and other coverings.

Farming practices also required early Europeans to keep a calendar so they could anticipate when to plant, when to harvest, and when to expect the rainy season or other changes in the environment. Because the changing phases of the moon could be easily observed, many early societies developed lunar calendars that recorded the phases of the moon and provided farmers with a reliable way to predict the change in seasons.

Agriculture and Social Changes

As the very basis of human sustenance, farming often held religious significance. The grave goods and **artifacts** left behind by prehistoric peoples suggest that early Europeans worshipped mother goddesses who were responsible for the fertility of the earth and its people. The Germanic groups honored Freya, while residents of ancient Greece worshipped Demeter, the goddess of grain. The Romans also venerated a goddess of agriculture named Ceres. Seasonal **rituals** and annual festivals paid tribute to these patrons of fertility in the hope that winning the goddess's approval would ensure a favorable growing season and a fruitful harvest.

Agricultural societies also developed economic and political structures based on the ownership of

LINK TO PLACE

Lunar Calendars in Europe and in Asia

The calendar, used to track the passing of time, gives a society a sense of its history and often takes on religious and spiritual significance. Ancient cultures observed the sky and used the motions of the sun and moon to define lengths of time in days, months, and years, which not only told farmers when to plant and harvest crops but also marked festival days and other memorable events. The earliest calendars were lunar calendars, often beginning a new month with the new moon.

The ancient Chinese were precise astronomers and built some of the first astronomical observatories. The first Chinese lunar calendars appear as incisions on **oracle** bones, dating to the late second millennium B.C.E., which seem to record a twelve-month year. The traditional Chinese calendar begins with the year 2637 B.C.E. and names each month after a sign of the zodiac. By 841 B.C.E., the Chinese calendar had become standardized. The ancient Hebrews and Hindus also used lunar calendars. Muslims still employ a lunar calendar for determining the dates of religious holidays and festivals, although the daily secular routine in Muslim lands follows the solar calendar.

In Europe, particularly in the British Isles, **megalith** structures, such as Stonehenge, once thought to have purely ceremonial purposes, may have functioned as observatories. Some scholars speculate that these large stone circles served as enormous calendars, designed to identify the solstice and other days that marked the passing of the year.

land. In both Celtic and Germanic societies, as well as in early Greece and Rome, the majority of people belonged to the class of landowners or farmers. Those who owned the most land had the most influence, and kings or chieftains were often the richest individuals in their society. Before the invention of currency, early Europeans bartered with the goods they had grown or manufactured, and cattle literally represented wealth. Thus, tales of cattle raids in Celtic, Germanic, and Greek myth reflect the means that enterprising warriors used to increase their fortunes and thereby their influence. A warrior class also developed in agrarian societies where it was important to defend farmland or forcibly win new lands when famine, war, or disease drove tribes from their homes.

AGRICULTURE AND EARLY CIVILIZATIONS

Methods of food production played a major role in shaping the way early Europeans worked and lived. Environmental factors such as soil and climate naturally determined what types of crops would grow. Fruits and vine crops thrived in southern Europe, while more hardy plants such as legumes and root vegetables could be grown in colder climates. The more limited growing seasons of central and northern Europe made it necessary to find ways to store food through the longer winters.

Farming among the Celts and Germanic groups did not change significantly during the **Iron Age**. In addition to cereal crops, such as wheat, barley, oats, and rye, early farmers planted peas, beans, and lentils. They harvested the grain with a sickle and roasted it slightly to keep it from spoiling during storage. When needed, grain was threshed to separate the kernels from the stalk and then winnowed to remove the outer hull, or chaff. A hand grindstone crushed the grain into flour that could be made into cakes or bread. With the discovery of yeast, fermented beverages, such as beer, became a staple of the diet. The types of tools found in graves dating to the Iron Age suggest that the tasks of preparing, grinding, and preserving cereals were assigned to women, while men presumably plowed the fields.

Men, women, and children worked together to maintain the field and harvest the crop.

In ancient Greece and Rome, growing urban populations led to the formation of large farm estates that could produce sufficient food. Slavery developed as a system to supply labor for the fields and grain mills. Although crop yields were relatively small and most activities had to be done by hand, Roman farmers also proved inventive under pressure to sustain the growing empire. Borrowing agricultural techniques from the Greeks and Etruscans, Roman engineers improved techniques to terrace fields, provide irrigation, and drain wetland to make more land available for planting.

Roman farming methods included crop rotation and the practice of leaving a field fallow, or unplanted, to help restore the soil. Farmers would sometimes sow a crop of alfalfa or legumes to replenish nutrients and make the soil ready for another cereal crop the next year. In addition to crops that could be exported to the cities, farmers grew crops to feed their livestock, among them turnips and beans. The Romans practiced selective breeding among their animals to provide the best beef, pork, and veal for their tables. Many agricultural techniques employed by the Romans remained in use in Europe throughout the Middle Ages.

See also: Archeological Discoveries; Cro-Magnon Peoples; Culture and Traditions; Etruscan Civilization; Greece; Myths, Epics, and Sagas; Neanderthal Peoples; Religion; Society; Technology and Inventions; Tools and Weapons.

FURTHER READING

Hillel, Daniel. *Out of the Earth: Civilization and the Life of the Soil*. New York: Free Press, 1991.

Mazoyer, Marcel, and Laurence Roudart. *History of World Agriculture: From the Neolithic Age to the Current Crisis*. Trans. James H. Membrez. New York: Monthly Review Press, 2005.

Thorpe, I.J. *The Origins of Agriculture in Europe*. New York: Routledge, 1999.

Alexander III, the Great (356–323 B.C.E.)

Ruler of ancient Macedonia whose conquests in Europe, Persia, and Asia created the largest empire in the ancient world. At the age of 20, Alexander ruled all of Greece; at 25, he conquered the Persian Empire. When he died in Babylon at the age of 32, he ruled over numerous peoples and would be remembered as one of the most celebrated figures of **classical antiquity**.

In 359 B.C.E., Alexander's father, Philip II, became king of Macedonia and began to build a military to defend against the warlike neighboring kingdoms of Illyria and Thessaly. In 357 B.C.E., Philip married Olympias, a princess of Epirus, a realm to the south. The family of Olympias claimed descent from Achilles, a Greek hero of the Trojan War, and Olympias supposedly told her son, Alexander, that he was the offspring of Zeus, chief of the Greek gods. Alexander is said to have believed in his own divinity and this might have made him fearless.

ASCENSION

Alexander grew up at the court of Pella, the royal capital, and his father brought the philosopher Aristotle (384–322 B.C.E.) from Athens as tutor. In addition to training in sports and singing, Alexander received lessons in science, natural history, philosophy, law, statecraft, and literature.

In 340 B.C.E., before leaving on a military campaign in Asia Minor (modern-day Turkey), Philip made Alexander his regent, to rule in his absence. During Philip's absence, Alexander led a Macedonian army against invaders from nearby

Thrace. He demonstrated his military prowess by repelling the invasion and then assaulting and capturing the enemy's city, which he renamed Alexandropolis. Father and son fought together to subdue Thrace, extending the boundaries of their kingdom.

In 339 B.C.E., they turned to the city-states of Greece, which had formed an anti-Macedonian League. A decisive victory at the Battle of Chaeronea the following year brought all of Greece except for Sparta under Philip's control. He next declared war on Persia. In 336 B.C.E., however, Philip was assassinated in the middle of a festival celebrating the marriage of his daughter Cleopatra. Alexander took over the kingdom, the army, and the plans for invasion.

CONQUESTS

Already seasoned in war, the new king Alexander moved immediately to establish his supremacy. He marched into Thessaly, where he was recognized as archon, or head of the government. He went on to subdue Thrace, Illyria, and tribes of rebellious Celts living north of Macedonia. In 334 B.C.E., he moved south to subdue a Greek rebellion which had been encouraged by the Persian king, Darius III (r. 336–330 B.C.E.). With a large swath of southern Europe under his control, Alexander resolved to take his army east and fulfill his father's dream of conquering the mighty empire of Persia.

From 334 to 333 B.C.E., Alexander marched through the western provinces of Asia Minor, taking town after town from its Persian governors and installing leaders loyal to him. In Halicarnassus he returned Queen Ada to her throne, and in gratitude she adopted Alexander as her son. He went on to the provinces of Phrygia and Bithynia. In Bithynia, Alexander untied the famous Gordian knot, which reportedly could only be untangled by the supreme ruler of Asia, by cutting it with his sword. Moving south, Alexander finally confronted the amassed forces of Darius at Issus.

Alexander's strategies at the battle of Issus against the larger army of the Persians showed his genius as a military commander. The defeated Darius fled, leaving Alexander not only in possession of

LINK TO PLACE

The Spread of Hellenistic Culture

The ancient Greeks referred to themselves as *Hellenes*, and the term **Hellenistic** came to describe the culture of Greece from the time of Alexander's reign into the first century B.C.E. Through his conquests, Alexander brought Greek art, architecture, language, religion, philosophy, and political ideals to parts of Europe, Egypt, and Asia. He established more than 70 towns, many of them named after him. Some served as defensive outposts, whereas others, such as Antioch, Pergamum, and Palmyra, became large commercial centers and seats of learning. Alexandria, in Egypt, flourished as a center of learning and trade for several centuries, with Greek citizens and a Macedonian **monarchy**; until the fall of the Roman Empire, it was one of the richest and most important cities in the ancient world.

As he built or refortified towns, Alexander improved defenses and introduced Greek styles of architecture in civic buildings, such as theaters, temples, libraries, and administrative complexes. With the introduction of the Greek language, the citizens of Alexander's empire gained access to the great works of art, poetry, and drama produced during the **classical** period in Greece. A shared language and common currency allowed the peoples of Alexander's empire to trade and communicate with one another in expanded ways. Alexander also introduced Greek customs and social ideals, which survived the dissolution of his empire after his death. The Ptolemy dynasty in Egypt, the Seleucid dynasty ruling Syria and parts of Persia and Asia Minor, and the Antigonid dynasty in Macedonia all retained their Greek culture until their kingdoms were, in turn, conquered by Rome.

the victory but also of Darius's family, who had been camped nearby. Alexander's gracious treatment of the Persian royal family showed a generous side of his nature; however, his brutal treatment of the citizens of Tyre, who resisted his invasion, demonstrated a ruthless side of his personality. When he entered Egypt, where he was crowned pharaoh in 332 B.C.E., Alexander showed his respect for the Egyptian gods by visiting the sacred shrine at the oasis of Siwa. The **oracle** there purportedly affirmed Alexander's belief in his divine descent.

In 331 B.C.E., Alexander's armies again faced the forces of Darius at Gaugamela (located in what is now northern Iraq), and again Darius fled. Alexander took possession of the rich Persian cites of Babylon, Susa, and Persepolis. He moved east after the fleeing Darius only to find that the Persian king had been assassinated by his own men. Pursuing Darius's assassins, Alexander arrived in Sogdia and there married a noblewoman, Roxane, in 327 B.C.E. Roxane accompanied Alexander on his next enterprise: conquest of India.

LEGACY

Alexander supposedly had planned to travel to the southern tip of India and from there sail back to Egypt. After crossing the Indus River, Alexander first defeated King Omphis (Ambhi) of Taxila and then King Porus, who both subsequently became his allies. Although Alexander's ambition was unlimited, his resources were not. Moving further into India, Alexander met with fierce resistance from the weather, from rebels incited by the Brahmin priests, and from his own men. Exhausted, failing in their courage, and having not seen their homes in more than eight years, Alexander's troops stopped at the Beas River and refused to go further. For once, Alexander's persuasive powers and inspiring spirit failed to move his men, and he agreed to turn back.

Alexander returned to Babylon in 323 B.C.E. While making plans to invade Arabia, Alexander fell ill from a fever and subsequently died. The fever might have been due to disease or to heavy drinking, though some suspected poison.

At the time of his death, although he was not yet 33, Alexander was already a legend. His empire stretched over three continents, and his subjects numbered in the millions. Although his wife Roxane gave birth to a son a few months after Alexander died, Alexander's legacy was not to be an empire. Rather, his influence persisted in the spread of **Hellenistic** culture throughout his conquered territories. After his death, Alexander's legend continued to grow, and later conquerors, such as Julius Caesar (100–44 B.C.E.) and the emperors of Rome, respected and strove to emulate his accomplishments.

See also: Aristotle; Caesar, Gaius Julius; Greece; Myths, Epics, and Sagas.

FURTHER READING

Cartledge, Paul. *Alexander the Great: The Hunt for a New Past*. Woodstock, NY: Overlook Press, 2004.

Fildes, Alan, and Joann Fletcher. *Alexander the Great: Son of the Gods*. Los Angeles: J. Paul Getty Museum, 2002.

Lane Fox, Robin. *The Search for Alexander*. Boston: Little, Brown and Co., 1980.

Archeological Discoveries

Archeology pursues the study of the past using material remains to draw conclusions about the culture and traditions of ancient peoples. By definition, history properly begins with the development of writing. Archeology, in contrast, supplies knowledge about prehistoric European cultures by recovering and studying evidence in the form of settlements, personal **artifacts**, burial practices, and human remains.

ARCHEOLOGICAL DISCOVERIES

ca. 450,000 B.C.E. First signs of Acheulian culture in Europe

ca. 130,000 B.C.E. Emergence of Neanderthal peoples in Europe

ca. 100,000 B.C.E. Beginning of Middle Paleolithic Period in Europe

ca. 40,000 B.C.E. Beginning of Upper Paleolithic Period in Europe; emergence of Cro-Magnon peoples (modern *Homo sapiens*) in Europe

ca. 30,000 B.C.E. Signs of Neanderthal inhabitation in Europe decline

ca. 17,000 B.C.E. Cave paintings at Lascaux created

ca. 12,000 B.C.E. End of last Ice Age; glaciers over Scandinavia begin to melt

ca. 6000 B.C.E. Agricultural practices in use around Mediterranean

ca. 4500 B.C.E. Spread of agriculture through central Europe

ca. 3000 B.C.E. Bronze implements in use around Mediterranean

ca. 1900 B.C.E. Building begins on Stonehenge in England

ca. 1450 B.C.E. Mycenaean Greeks conquer Minoans on Crete

ca. 750 B.C.E. Ironworking techniques develop in central Europe

C.E. 79 Eruption of Mt. Vesuvius buries towns of Pompeii and Herculaneum

C.E. 1748 Excavations begin in Italy revealing buried towns of Pompeii and Herculaneum

C.E. 1846 Discovery in Hallstatt, Austria, of Celtic cemetery dating between 800 and 500 B.C.E.

C.E. 1856 Neanderthal skull found in Neander Valley (Neander Tal) in Germany

C.E. 1857 Celtic artifacts dating between 400 and 100 B.C.E. found at La Tène, Switzerland

C.E. 1868 Cro-Magnon skeletons found at Les Eyzies, France

C.E. 1870 German antiquarian Heinrich Schliemann begins excavations at ancient city of Troy

C.E. 1879 Cave paintings dating to around 13,000 B.C.E. found at Altamira, Spain

C.E. 1900 English archeologist Sir Arthur Evans excavates the Minoan palace at Knossos, Crete

C.E. 1939 Excavation of Anglo-Saxon ship burial at Sutton Hoo, England, dating to ca. C.E. 600

C.E. 1940 Cave paintings at Lascaux discovered

C.E. 1977 Tomb of Philip II of Macedonia (382–336 B.C.E.), father of Alexander III, the Great, discovered in northern Greece

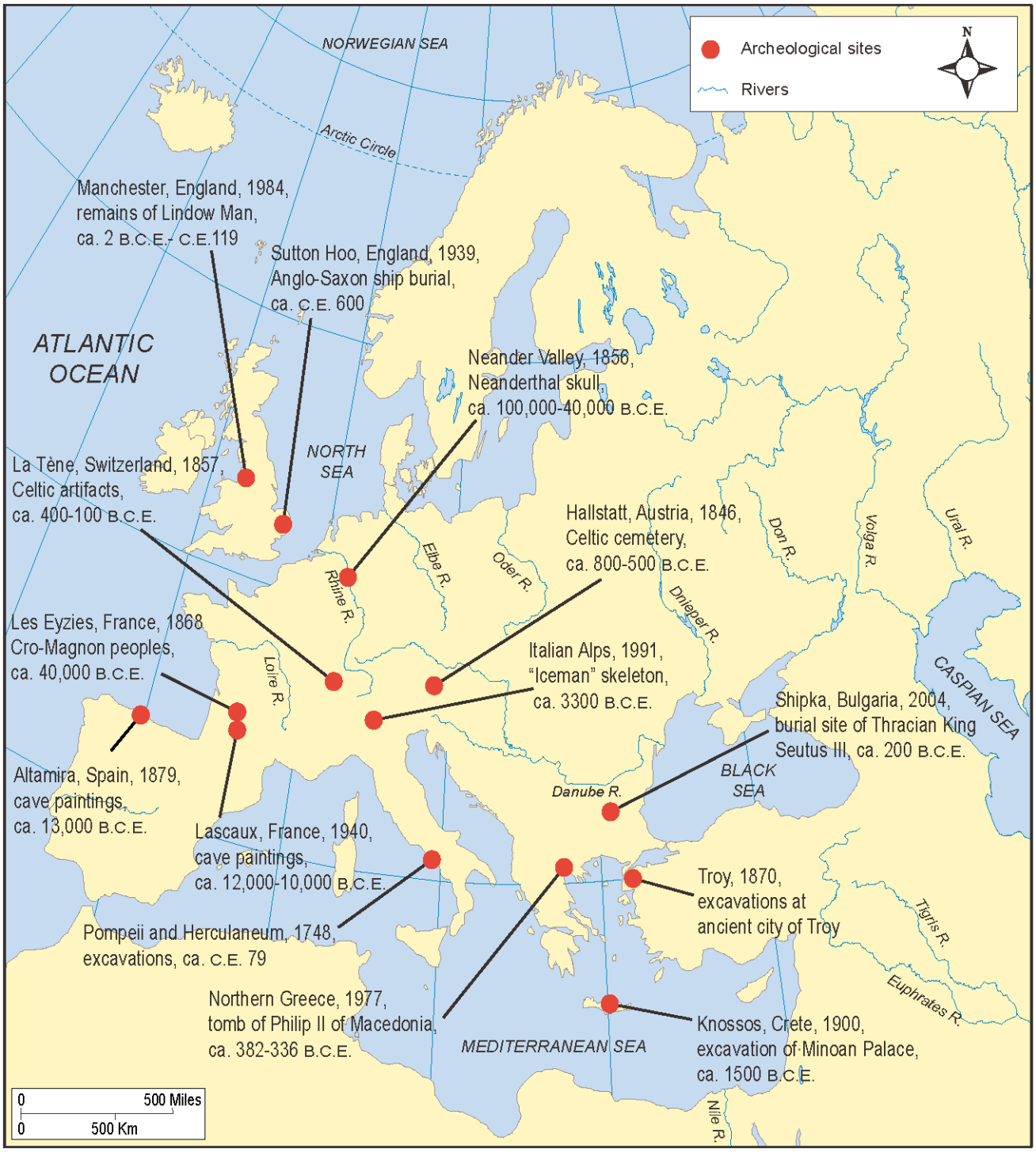
C.E. 1984 Remains of Lindow man, who died between 2 B.C.E. and C.E. 119, retrieved from a bog named Lindow Moss near Manchester, England

C.E. 1991 Frozen "Iceman" skeleton dating ca. 3300 B.C.E. found in Italian Alps

C.E. 2004 Burial site of wealthy Thracian King Seutus III who ruled ca. 200 B.C.E. found near Shipka, Bulgaria

MAJOR ARCHEOLOGICAL SITES OF ANCIENT EUROPE

Unearthed settlements and burial sites provide the most valuable records of how the peoples of ancient Europe lived. The graves of kings, such as the tomb of Philip II of Macedonia (382–336 B.C.E.), father of Alexander III, the Great (356–323 B.C.E.), often contain the treasures of an empire or civilization. Equally valuable are the finds in ordinary cemeteries such as the weapons, brooches, pottery, and bronze vessels found in the Iron Age Celtic burial ground at Hallstatt, Austria.



TURNING POINT

Loughcrew

Spread over a series of hills, the cluster of monuments at Loughcrew, in County Meath, compose one of the largest **Stone Age** sites in Ireland. Built between 4000 and 3000 B.C.E., the monuments consist of human-made mounds, or tumuli, pillar stones, a ring fort, and more than 30 cairns or passage graves, ranging from 55 feet (17 m) to 180 feet (55 m) in diameter.

In most of the cairns, a stone passage extends up to 28 feet (8.5 m) in length into a set of interior chambers laid out in the shape of a cross, or cruciform, with side chambers connected to the main room. Large stones called corbels support a ceiling high enough, in some cases, to allow a person to enter. Outside, the mound of earth covering the cairn is often surrounded by a ring of large boulders called curbstones. The Hag's Chair, one of the 37 curbstones encircling Cairn T, is six feet (1.8 m) high and weighs 10 tons.

Many of the stones both within and outside the cairns contain decorations and symbols suggesting that the site functioned as an enormous calendar. For instance, on the two days of the year when the number of daylight hours approximately equals the hours of night—the vernal (spring) and autumnal equinoxes—a ray of sunlight shines through the passage into Cairn T and illuminates the symbols carved onto the large flat backstone. Smaller cairns receive sunlight on the solstices, both the longest and shortest days of the year, as well as the cross-quarters days that fall between the solstices and equinoxes.

In addition to ceremonial and astronomical functions, the complex at Loughcrew also served as an ancient burial ground. Fragments of bone blades, glass beads, and cremated human remains suggest the cairns may have been in use as late as the first century C.E.

Archeological discoveries throughout modern-day Europe provide valuable information about the **cultural history** of little-documented ancient groups, such as the Minoans or Etruscans, as well as about preliterate societies, such as the **Iron Age** Celts or Germanic groups. Even well-documented cultures such as those of Greece and Rome emerge more fully to the modern eye when archeological finds supplement the historical record.

THE NATURE OF ARCHEOLOGICAL EVIDENCE

Archeologists searching for clues about the nature of prehistoric European peoples typically focus on burial or settlement sites. In many cases, burials preserve important cultural artifacts, such as jewelry or household goods, that otherwise become lost or destroyed in the course of daily life. Easy-to-find burial sites historically have been robbed before archeologists could reach them, as was the case with the passage graves in Ireland and the *tholos* graves of the Etruscans. Excavators at the burial mounds at Sutton Hoo in Suffolk, England, also initially found nothing of interest. Digging a bit further, however, excavators found an intact ship filled with treasures belonging to its owner, an Anglo-Saxon king who ruled in the seventh century C.E. The find illuminated a period of English history formerly thought to be a dark age.

Less spectacular burials can still be treasure troves in terms of information. Household items, such as drinking vessels; personal items and luxury goods, such as clothing and jewelry; and the tools and weapons buried as grave goods in the Celtic cemetery in Hallstatt, Austria, discovered in 1846 C.E., tell historians how members from all levels of the society lived. Settlements can be more difficult to locate, particularly since inhabitants of an area tend to build on top of previous constructions. For example, only recently have excavations at Dublin, Ireland, revealed the port founded by the Norsemen in C.E. 917.

DISCOVERING PREHISTORIC EUROPE

Archeology emerged as an academic discipline in Europe in the nineteenth century when some researchers began to use scientific methods to analyze and classify the past. Before this time, people with an interest in the past were considered antiquarians or hobbyists. Many antiquarians pursued archeology not for the sake of knowledge but in hopes of unearthing buried treasures. In addition, most Europeans believed in some form of Christianity, which taught that the world was only a few thousand years old. Because of this **historical understanding**, few Europeans imagined the existence of more ancient cultures or peoples.

During the Enlightenment of the seventeenth and eighteenth centuries, however, a greater willingness to question traditional beliefs—as well as increasing knowledge about the rest of the world—spurred interest in Europe's past. **Historical inquiry** and **historical research** began to replace unquestioning acceptance of Christian **doctrine** and the word of previous authorities. In C.E. 1748, excavations began at Herculaneum and Pompeii, two thriving Roman towns obliterated by the volcanic eruption of Mount Vesuvius in C.E. 79. The ruins discovered there captured the modern European imagination, reviving interest in the ideals and achievements of **classical** Greece and Rome.

As archeology developed into a profession, better techniques for finding, analyzing, and preserving artifacts developed. In the C.E. 1830s the Danish archeologist C.J. Thomsen adopted the three-age method to describe the development of human culture, classifying stages of progress in terms of the chief material used for weapons and other implements. He thus organized prehistoric Europe into the **Stone Age**, the **Bronze Age**, and the Iron Age. In addition, archeologists often name cultures that share similar tools, building methods, pottery, burial rites, or artistic styles by the place where these artifacts were first discovered. In this way, La Tène, Switzerland, gave its name to a distinctive style of Celtic art, and finds of tool-making implements like those found at Le Moustier in France are said to belong to the Mousterian culture.

Old Stone Age

Historians further classify the Stone Age or **Paleolithic** period into three periods distinguished by the development of tool-making technology and new methods of subsistence or food-gathering. In Europe, the Lower, Middle, and Upper Paleolithic periods cover the time of the first signs of human habitation to the close of the last Ice Age. This concept of **periodization**, or dividing history into distinct **eras**, is one of the key contributions of modern archeology. It enables scholars to trace **patterns of continuity and change** over large sweeps of time, to gain a sense of the pace and direction of human development.

During the Lower Paleolithic Period in Europe, between 450,000 and 100,000 B.C.E., the pebble and flake tools that mark the Acheulian culture were in use. The culture is named for the French town of Saint-Acheul, where in the C.E. 1830s and 1840s a quantity of stone tools were found alongside the bones of animals known to be extinct. The find confirmed suspicions that the world had a history far older than previously thought. Scholars now suspect that these first Europeans migrated from homelands in Africa and Asia.

The archeological finds concerning Neanderthal peoples, who form part of the Mousterian Culture, largely date to the Middle Paleolithic Period, between 100,000 and 40,000 B.C.E. In C.E. 1856, the discovery of a skull and partial skeleton in a cave in the Neander Valley in Germany led its finders to conclude that they had found a type of human predating the modern *Homo sapiens*. They named this branch of the human family *Homo neandertalensis*, or Neanderthal.

In Europe, the Upper Paleolithic Period began around 40,000 B.C.E. with the emergence of Cro-Magnon peoples, the first modern humans. Cro-Magnons were named for the cave near Les Eyzies in the Dordogne region of France where the fossilized remains of these modern humans were found in C.E. 1868. A variety of human cultures emerged

In 1856, scientists recognized a skull and partial skeleton found in the Neander Valley in Germany as a different species of human, or Neanderthal man, dating to 40,000 B.C.E. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

in Europe during the Upper Paleolithic Period, as bone and antler began to supplement stone for use in making tools, and better techniques for building shelter and making clothing evolved. Traces of communal hunting and fishing activities suggest that these ancestors of modern Europeans had developed a cooperative sort of society. Cro-Magnon peoples also left behind rock art, decorative items of horn and bone, and the elaborate cave paintings depicting animals now extinct.

Middle and New Stone Ages

Beginning around 10,000 B.C.E., the **Mesolithic Period** witnessed a revolution in the human settlements of Europe. With the end of the last Ice Age and the subsequent changes in climate and food resources, fishing and other food-gathering activities began to supplement hunting. Finds from various Mesolithic sites throughout Europe show that the gradual domestication of animals and plants led to the establishment of agriculture, and the invention of pottery led to better food storage techniques. The tendency toward permanent human settlements provides archeologists with better records of daily life. Refuse piles, or kitchen middens, which were heaps of food scraps and discarded household objects, such as those at the Ertebolle site in Denmark, leave clues to the diet and lifestyle of the inhabitants of such sites.

The introduction of agriculture customarily marks the beginning of the **Neolithic Period**, which took place at various times in different regions of Europe. Farming communities developed in parts of Greece and Crete as early as 6000 B.C.E., while the bulk of central and western Europe did not adopt agriculture until around 4500 B.C.E. Along with farming practices, technologies for manufacturing potteries and **textiles** significantly changed the civilizations of early Europe.

Bronze and Iron Ages

The development of metalworking techniques to make implements and weapons marks a turning point in various European cultures and very often accounts for why one group gains supremacy over another. In several early cultures around the Mediterranean, experimentation with copper led to the

discovery that smelting tin into an alloy of copper resulted in a stronger metal—bronze—thus initiating the Bronze Age. Bronze implements were used in southern and southeastern Europe around 3000 B.C.E. but did not appear in central Europe until 1800 B.C.E. They reached Scandinavia even later, around 1500 B.C.E.

Ironworking techniques entered eastern Europe around 1000 B.C.E. The discovery of the Hallstatt cemetery, with more than 1,000 graves, yielded proof that the Celts of central Europe had learned to work iron as early as 800 B.C.E. Celtic weapons, implements, and artistic creations dating to between 800 and 500 B.C.E. are thus classified as belonging to the Hallstatt culture. Celtic migrations as well as the movements of other Indo-European peoples spread ironworking techniques to all parts of Europe.

The Iron Age is the latest of the time periods used to describe prehistoric Europe. The rise of literate civilizations in Greece and Rome around 750 B.C.E., and the spread of their culture and learning to the preliterate societies they contacted, ended the European Iron Age and ushered in the period of recorded European history. Even when historical documents exist, however, the work of archeology provides important knowledge about the ways early Europeans lived.

ARCHEOLOGY AND THE HIDDEN PAST

Once the excavations of Pompeii proved that archeology could supplement recorded history, European archeologists began to wonder if there might be a historical basis for stories preserved in the myths, epics, and sagas of various cultures. For example, antiquarians had long searched for evidence to prove that the Trojan War of the Greek poet Homer's epics actually happened. In C.E. 1870, the German businessman Heinrich Schliemann decided to prove that the city of Hissarlik, in Turkey, was the site of ancient Troy. Schliemann uncovered not one ancient city but several, all built on the same site over a period of hundreds of years. Archeologists generally agree that one of the cities Schliemann excavated was the Troy of Homer's epic, although not the one that Schliemann believed to be Troy at the time of his discovery.

Similarly, the British archeologist Sir Arthur Evans traced Greek myths about King Minos to the island of Crete and began excavations at Knossos in C.E. 1900. His discovery of an enormous Bronze Age palace at Knossos proved that the kingdom once thought legendary had actually existed. In C.E. 1977, a Greek archeologist discovered the tomb of Philip II of Macedonia (382–336 B.C.E.), which gave scholars further insight into the life of his famous son, Alexander III, the Great (356–323 B.C.E.). In C.E. 2004, archeologists excavating the rich tomb of King Seutus II, who ruled ca. 200 B.C.E., learned much about the ancient kingdom of Thrace, now modern-day Bulgaria.

Perhaps the most romantic stories about archeological discoveries are those that are entirely accidental. The cave of Lascaux, with its treasure of prehistoric paintings, surfaced in C.E. 1940 when four French teenagers out for a walk lost their dog into an opening beneath the roots of a fallen tree. Although scholars immediately understood the importance of the Lascaux find, such was not the case in C.E. 1879 when a small girl playing in a cave near Altamira, Spain, discovered paintings on the ceilings. Only a few believed at the time that the art could be the work of early Europeans; most assumed that the paintings were a hoax.

In a different accident in C.E. 1983, police looking for a recent murder victim were led to an English bog named Lindow Moss where, in the next year, workers digging for peat found the remarkably preserved body of a Celtic man who died between 2 B.C.E. and C.E. 119. In C.E. 1991, hikers in the Italian Alps discovered the frozen body of a man who died ca. 3300 B.C.E. Along with the careful and systematic work of trained scholars, continued archeological discoveries throughout the region, some carefully planned and others accidental, serve to broaden the modern understanding about ancient European cultures and traditions.

See also: Art and Architecture; Cave Paintings; Celts; Culture and Traditions; Language and

Writing; Minoan Civilization; Pompeii; Religion; Technology and Inventions; Tools and Weapons; Trojan War.

FURTHER READING

Midgley, Magdalena S. *The Monumental Cemeteries of Prehistoric Europe*. Stroud, UK: Tempus, 2005.
Renfrew, Colin. *Archaeology and Language: The Puzzle of Indo-European Origins*. New York: Cambridge University Press, 1988.
Scarre, Chris. *Exploring Prehistoric Europe*. New York: Oxford University Press, 1998.
Wells, Peter S. *Beyond Celts, Germans, and Scythians: Archaeology and Identity in Iron Age Europe*. London: Duckworth, 2001.

Aristotle (384–322 B.C.E.)

Greek philosopher whose work had a profound and enduring influence on many fields of study, including art, poetry, **rhetoric**, theology, ethics, the natural sciences, politics, and mathematics. He tutored Alexander III, the Great (356–323 B.C.E.), and ran an influential school in Athens, Greece. Aristotle left no area of human knowledge unexplored, and his writings formed the foundation of European thought for centuries to follow.

Aristotle's father, Nicomachus, was physician to the Macedonian king Amyntas II. At age 17, Aristotle went to Athens to study at the Academy of Plato, a leading Athenian philosopher.

Aristotle remained at the Academy until Plato's death in 347 B.C.E. In 338 B.C.E., Aristotle returned to Macedonia to tutor the young Alexander. Four years later, he founded his own institution in Athens, the Lyceum, informally known as the Peripatetic School because Aristotle often conducted lectures while walking through the garden. His teaching library, with its collection of maps, manuscripts, and **artifacts**, became a model for libraries elsewhere.

GREAT LIVES

Plato

Plato was a poet and philosopher who lived in Athens, Greece, between ca. 427 and 347 B.C.E. He was born to an **aristocratic** family and received his education through extensive reading, travel, and consulting with the educated people of his day, including the Athenian philosopher Socrates. Plato founded the Academy, which survived for 900 years.

Plato's writings show his interest in knowledge and his concern with correcting the political and social abuses he saw in his society. He believed that every part of the natural world followed certain principles ordered by a higher realm of Ideals, and that these Ideals could be discovered through thoughtful examination and inquiry. Modeled on the Socratic method of inquiry, Plato's *Dialogues* address topics ranging from art, love, and the soul to logic, law, and politics. In the *Dialogues,* Plato does not offer a set of **doctrines** but rather presents a series of opposing ideas and encourages readers to draw their own conclusions. Along with those of his student Aristotle, Plato's ideas about the nature of existence form the foundation of intellectual thought in the Western world.

After Alexander's death, anti-Macedonian feeling ran high in Athens, and Aristotle was compelled to leave the city to avoid a charge of impiety, the same accusation that had led to the death of the famed Athenian philosopher Socrates. Aristotle died a year later from a digestive disease.

The works of Aristotle survive as lecture notes compiled by his students. In general, Aristotle's views tend to avoid extremes and instead favor a sense of balance. Aristotle believed that anything humanly knowable could be arrived at through perception and logic. In his *Physics*, he applies a systematic method to discovering the laws that govern the natural world, and in *Metaphysics*, he uses logic to contemplate the nature of truth. In his book *On the Soul*, Aristotle asks the question of what animates all living beings.

In his works, Aristotle continuously explores the nature of human understanding and moral responsibility. His *Ethics* opens with the declaration that all human endeavors—every inquiry, every art, every action and choice—should work toward a common good. Aristotle taught that achieving virtue is more important than gathering material possessions and that virtue is achieved through moderation in all things. Humans attain happiness when they can balance reason with the pursuit of their desires.

In his *Poetics*, Aristotle argues that literature is beneficial because it allows a catharsis, or expression of extreme emotion. In his treatises on politics, he examines the origins and structures of the state and agrees with Plato that division of labor is the foundation of society. Unlike Plato, however, Aristotle believed in private property and recommended constitutional government as the most practical and beneficial political system, two ideas fundamental to the democratic countries of the western world. The ideas in these treatises provided a starting point on which later politicians and philosophers built. Aristotle is still regarded as one of the greatest thinkers of **antiquity**.

See also: Alexander III, the Great; Art and Architecture; Greece; Society.

FURTHER READING

Ackrill, J.L., ed. *A New Aristotle Reader*. Princeton, NJ: Princeton University Press, 1987.

Ross, Sir W. David. *Aristotle*. 6th ed. New York: Routledge, 1995.

Art and Architecture

Art and architecture provide insight into the values, customs, and daily life of the peoples of ancient Europe. Building styles and functions reflect how early European societies were organized and sustained, while various types of ancient artwork, in the form of literature, music, and visual arts, such as painting and sculpture, reveal how individuals understood and attempted to enhance or imitate nature and decorate the world around them.

PREHISTORIC ART AND ARCHITECTURE

Much of the art and architecture of ancient Europe had a practical as well as decorative function. What survives serves as a valuable historical record that illustrates many of the beliefs and daily routines of ancient peoples. In modern times, archeological discoveries continue to uncover amazing **artifacts** that shatter the myth that prehistoric peoples were not capable of complex thought.

Stone Age Art and Architecture

In the Chauvet cave in the Ardèche valley in southern France, paintings from as early as 30,000 B.C.E. depict lions, panthers, mammoths, cave bears, and rhinoceroses. More than a set of visual instructions

This mosaic of Dionysius or Bacchus, the god of wine, appearing in a second-century C.E. Roman villa in Corinth, Greece, exemplifies how the Romans incorporated the art, architecture, and religion of ancient Greece into their culture. (Louie Psihoyos/Science Faction/Getty Images)

for hunting, these paintings were long thought to have a ceremonious function, perhaps serving in magical **rituals** designed to ensure a good hunt. In addition, archeologists have discovered many small figurines of stone, bone, or clay dating to the Upper **Paleolithic Period** (ca. 40,000–10,000 B.C.E.), including several statuettes called Venuses that might have a religious significance. **Petroglyphs** carved into rock faces dotted the landscape of early Europe, perhaps serving as a means of communication as well as an attempt to beautify what was largely, until the end of the last Ice Age, a tundralike steppe, a harsh and often featureless environment.

Several peoples living in Western Europe in the **Neolithic Period** built enormous stone structures called **megaliths** that possibly served as tombs, holy places, or calendars for observing the passing of time. These stone constructions, which appear as single pillars or groups of stones set in circles, involve huge slabs of stone, some weighing up to 20 tons (18 metric tons). In some places the circles were covered with a mound of earth called a *tumulus* (plural: *tumuli*). The tumulus at New Grange, Ireland, and the ring of standing stones at Stonehenge near Salisbury, England, are two of the most impressive examples of megalith structures.

Bronze Age Art and Architecture

Near the beginning of the **Bronze Age**, around 3000 B.C.E., civilization developed on the Cyclades, islands in the Aegean Sea. Cycladic **artisans** produced silver jewelry, pottery with geometric designs, and small marble sculptures imitating the human form. Nearby, the art of the Minoan civilization on Crete, which developed after 3000 B.C.E., reflects a love of beauty and a sense of natural order. Pottery decorated with

naturalistic scenes and small statuettes, many of women holding snakes, hint at the religious as well as everyday life of this lost culture. Minoan artisans knew advanced techniques for making metalwork of gold and copper, while frescoes, paintings made on wet plaster as it dried, decorated the walls and ceilings of the palaces at Knossos, Mallia, and Phaistos.

The architecture of these buildings demonstrates how the palace was central to Minoan government. The palace's central courtyard opened onto a series of buildings that served as living quarters, an administrative complex, gathering areas, and storage rooms. Multiple stories, exterior staircases, and columns helped divide space within the palace. When earthquakes or other disasters wrecked a palace, workers built on the remains, giving the new building the look of a labyrinth.

The Mycenaean culture developing on the Greek peninsula incorporated Minoan influence into its pottery and metalwork but reflected the society's militaristic orientation. Palace frescoes and the scenes painted on large storage vessels, or *kraters*, often involve warfare. The Mycenaeans built fortified towns where both the art and the defensive architecture were designed to intimidate potential invaders. For example, visitors to Mycenae after 1330 B.C.E. would have passed through the Lion's Gate, guarded by massive lions carved in stone.

GREEK ART AND ARCHITECTURE

Art produced in Greece is classified by period, each characterized by a particular style of decoration. In the Geometric period (ca. 900–750 B.C.E.), vases display patterns with lines and shapes similar to the designs found in earlier Minoan, Mycenaean, and Phoenician cultures. Greek temples, the best examples of surviving Greek architecture, were made of wood and had two main rooms, a smaller entry chamber and a larger audience hall that housed a statue of the god to whom the temple was dedicated. In the periods that followed, Greek art and architecture evolved to have a beauty and refinement that other European cultures admired and strove to emulate.

Archaic Age

Examples of Greek art from the Archaic Age (700–480 B.C.E.) include vases depicting mythological stories, with figures of the gods painted in either red or black, and life-sized *kouros* or *kore* sculptures of male and female figures. Homer composed his epic poems and Sappho wrote her lyric verse during this time. In the Greek temples, limestone replaced wood as the main construction material, although the basic temple shape remained a long, rectangular building surrounded by a porch or colonnade. Rows of columns bore the weight of the clay tiles of the ceiling. The Parthenon in Athens is the most famous of the Greek temples.

Classical Age

Greek art of the **Classical** Age (480–323 B.C.E.) shows a greater attention to the principles of proportion, balance, and harmony also reflected in the architecture. Figures of classical sculpture exhibit more natural features and expressions, capturing an energy of movement quite different from the archaic statues. This detailed consideration of the human form was inspired by the philosophy, held by Aristotle (384–322 B.C.E.) and others, in which humans held a superior place in the natural order. Greek pottery, metalwork, and painting, which often depicted shapes or activities familiar in everyday life, reflected an appreciation both for human comforts and for the beauty of nature.

During the classical period, sometimes called the Golden Age, Greek poetry and theater evolved from their roots in religious festivals into complex and powerful art forms. Dramatists such as Sophocles (496–406 B.C.E.) examined the problems of characters struggling to balance the demands of family and government, a struggle to which many Greek citizens could relate. Philosophical ideals such as balance and order were reflected in the graceful symmetry of the public buildings such as temples, theaters, and assembly halls built during this time.

LINK TO PLACE

Classic Columns: Ancient Greece and the United States

The columns of ancient Greece fall into one of three orders: Doric, Ionic, and Corinthian. These names derive from the area in ancient Greece where the style most frequently appeared.

Doric columns have no base, exhibit a plain shaft, and have a simple capital made of a circle topped by a square. The *frieze*, or area atop the column, bears simple decorations and carvings. The Ionic columns have a taller and more slender-looking shaft, grooved with lines representing the axe-marks left on the timbers of earlier wooden temples. An Ionic column typically consists of a base involving a set of stacked rings, a capital in the shape of a scroll, and a plain frieze at the top. Although the base and shaft of the Corinthian column resemble those of the Ionic order, the elaborate capitals engraved with flowers and leaves add a distinctive decoration.

The neoclassical style of art and architecture, which became popular in the period following the American Revolution, drew its inspiration from Greek and Roman models. The Greek Revival style in particular borrowed elements from the architecture of **classical** Greece. Public or private buildings from this period have porches or porticos supported by columns of the Doric, Ionic, or Corinthian order, with moldings between the tops of the columns and the roof that are meant to resemble the Greek buildings. These moldings are often carved with scenes from Greek mythology, reflecting the enduring fascination with the culture and traditions of this ancient civilization.

Hellenistic Greece

The art and architecture of the **Hellenistic** period (323–ca. 100 B.C.E.), ushered in by the conquests of Alexander III, the Great (356–323 B.C.E.), shows a greater interest in conflict, contrast, and experimentation. Naturalism replaced idealism as the governing aesthetic, or principle, that artists tried to attain. Some artisans focused on portraying the dynamics of inner emotions and everyday life; others incorporated heroic subjects and ideals into their paintings or sculpture. In architecture, a new interest in town planning led to a proliferation of civic centers, city squares, theaters, and gymnasia. The artistic refinement of the Greeks exerted a formative influence on surrounding and later cultures like the Celts and Romans.

CELTIC ART AND ARCHITECTURE

Celtic art is typically divided into two distinct traditions: the Hallstatt culture (ca. 1200–500 B.C.E.) and the La Tène culture (500–50 B.C.E.). During the Hallstatt period, artisans working in bronze, silver, iron, and gold produced decorated vessels, ornamental weaponry, and jewelry such as clasps or pins. Jewelers also made use of imported ivory and amber, while potters enameled their wares with a hard, glossy finish and then painted the surface with symbolic, geometric designs.

Hallstatt Celts built hill-forts fortified with wooden halls, protective walls (or palisades), and earthworks made of a series of walls and trenches. Spacious temples stood at the center of these protected towns. The Celts built long, straight roads for their horses and chariots and *tumuli* for the graves of important people. Celtic burial sites containing personal goods, household items, and wheeled vehicles furnish most of the surviving Hallstatt art.

The La Tène style is characterized by long, curved lines. Pieces of metalwork, such as bronze vessels, jewelry, helmets, and shields, show spiral and interlace patterns representing stylized animal and vegetable forms. The detailed work on jewelry in the form of *torcs* (neck rings) and *fibulae*

(brooches) suggests the Celts employed or learned from Greek artisans to elaborate on their native styles.

ROMAN ART AND ARCHITECTURE

Roman art fused native Latin or Italic traditions with influences from the Greeks and Etruscans. In the earliest Roman villages, consisting of mud huts with thatched roofs, artifacts such as clay pottery and bronze pins were simple and functional. Over time, the Romans acquired a taste for Etruscan paintings and luxury goods like enamelware and jewelry. They also acquired the Etruscan love for ceremonial displays and fine banquets that turned the process of preparing and eating food into an art form.

Roman Republic

Art in the Roman world served several public functions: documenting Rome's increasing military expansion, celebrating historical events, and honoring influential persons. Military victories furnished popular subjects for the mural paintings found in the villas and tombs of wealthy Romans, while sculptures and busts gave tribute to heroic generals and well-known statesmen. Rome's **subjugation** of the Greek colonies on the Italian peninsula in the third century B.C.E. and its conquest of the Aegean peninsula in the following century led to extensive contacts between the Roman and Greek cultures. Greek sculpture, visual and performing arts, and literature provided models for Roman artists. Rome's epic poetry, drama, and statuary blended Greek ideals with a Roman taste for austerity and ceremony.

The Romans expressed their ingenuity more fully in architecture. The first Roman advancements in towns and public buildings borrowed from Etruscan innovations such as the semicircular arch. The Etruscans employed the arch to build stone vaults to house their dead; the Romans expanded its use to **aqueducts**, city walls, and doorways. Early Roman temples also followed the Etruscan style, with a deep porch, widely spaced columns, a triangular roof with overhanging eaves, and inner chambers to hold statues of the gods.

Imperial Rome

Roman architecture reached the height of its maturity during the first two centuries of the Roman Empire, a time known as the *Pax Romana*, or Roman Peace (27 B.C.E.–C.E. 180). Vaulted domes and broad galleries called arcades, constructed of stone and concrete, made public buildings sturdy and spacious. Sanctuaries used terraces, tunnel-like passageways, and columned vaults to guide visitors through the sacred areas within. Public officials designed, financed, and built civic areas to house assemblies, courts, and other political gatherings. The most important of these areas in any city was the forum, a public space that incorporated governmental, religious, and commercial buildings arranged around a common open area.

The most spectacular forum in the empire was the Forum Augustus in Rome, commissioned by the first Roman emperor, Octavian (also known as Caesar Augustus; 63 B.C.E.–C.E. 14) and inspired by the Forum designed and built by Octavian's great-uncle, Julius Caesar (100–44 B.C.E.). Both designs enclosed a rectangular space with long colonnades and an elaborate temple. The carvings and sculpture in these forums exhibit the classical Roman ideals of balance, prosperity, and reverence for tradition.

Much of Roman architecture was practical, like roads, aqueducts, and drainage systems that supplied cities. Other examples are ornamental, such as portrait busts, **reliefs**, and mosaics, which decorate both private and public buildings. The enormous villas of wealthy Roman senators, the houses of emperors, and the massive amphitheaters built to house public spectacles, such as festivals, games, gladiatorial displays, and executions, were so solidly built as to survive the fall of the Roman Empire in C.E. 476 and resist decay through the centuries, inspiring the modern imagination with the stately artifice and imperial glory of Rome.

In fact, many Roman ruins still stand today, serving as testaments to the achievements and artistic accomplishments of ancient European cultures.

See also: Cave Paintings; Celts; Culture and Traditions; Etruscan Civilization; Greece; Minoan Civilization; Religion; Rome; Society; Technology and Inventions; Trojan War.

FURTHER READING

Belozerskaya, Marina, and Kenneth Lapatin. *Ancient Greece: Art, Architecture, and History*. Los Angeles: J. Paul Getty Museum, 2004.

Cunliffe, Barry, ed. *The Oxford Illustrated History of Prehistoric Europe*. New York: Oxford University Press, 2001.

Gabucci, Ada. *Ancient Rome: Art, Architecture, and History*. Ed. Stefano Peccatori and Stefano Zuffi. Trans. T. M. Hartman. Los Angeles: Getty Trust Publications, 2002.

Megaw, Ruth, and Vincent Megaw. *Celtic Art: From Its Beginnings to the Book of Kells*. Rev. ed. London: Thames & Hudson, 2001.

Mohen, Jean-Pierre. *Megaliths: Stones of Memory*. Trans. Dorie B. Baker and David J. Baker. New York: Abrams, 1999.

Augustus

See Rome; *Pax Romana*.

Caesar, Gaius Julius (100–44 B.C.E.)

Roman general and dictator whose military conquests furthered the reach of Roman rule and whose participation in the Roman civil wars helped bring about the end of the faltering Roman **Republic** in 27 B.C.E. Caesar's assassination in 44 B.C.E. at the hands of Republican supporters led to the beginnings of the Roman Empire, making him the key figure in a pivotal moment in the history of Rome and, by extension, the history of ancient Europe.

Born into an **aristocratic** family, Caesar held a variety of military and diplomatic offices that helped him acquire personal wealth and influence. After serving as governor of Spain, which was then a Roman province, Caesar was elected consul, the highest political office in the Roman Republic in 60 B.C.E. In 58 B.C.E., he took command of Roman armies in Gaul and, over the next seven years, fought campaigns that extended the Roman province through modern-day France, Belgium, and parts of Switzerland. In 55 B.C.E., he invaded Britain but was unable to subdue the Celtic tribes there. Caesar's written accounts of his campaigns serve as the first military memoirs.

Caesar's military successes and increasing popularity concerned the Roman senators, who feared his influence. In 49 B.C.E., under the pressure from a rival consul, Pompey (106–48 B.C.E.), the senate commanded Caesar to resign his post as leader of Gaul and its legions. In response, Caesar led his army across the Rubicon River, which separated Gaul from Italy, thus provoking civil war. After waging battles in Spain and Africa to defeat Pompey and his supporters, Caesar was elected to successive terms as consul. In 46 B.C.E., he took the title of dictator, a one-year position that gave him sole control of both the Roman government and the military. He introduced reforms meant to stabilize grain prices, aid military veterans, protect lower-class citizens, and refurbish public buildings.

Hoping for a return to stability, the senate extended Caesar's dictatorship, and in 44 B.C.E., he

was made dictator for life. Some of his reforms were delayed, however, by his plans to attack Parthia, an empire that spread over much of the Near and Middle East. In addition, rumors circulated that Caesar intended to abolish the republic and make himself king. To prevent this, a group of senators assassinated Caesar in the Roman Forum on March 15, 44 B.C.E.

The move to restore the republic instead brought about its end. Caesar's heir and grand-nephew Octavian (63 B.C.E.–C.E. 14) waged another civil war with both the republican opposition and Caesar's former friend and fellow general Marc Antony (83–30 B.C.E.) for control of the government. Octavian emerged the victor, and when he was proclaimed emperor in 27 B.C.E., Octavian assumed the name Caesar Augustus, becoming the first of the Roman emperors. After Augustus, succeeding Roman emperors assumed the name Caesar to indicate imperial dignity.

Caesar's political acumen, military success, high ambitions, and sudden death made him a prominent figure in the history and literature of Europe for millennia to follow. In the centuries following the fall of the Roman Empire in C.E. 476, many of the local kings who hoped to unite a politically fractured Europe under their rule held up Caesar's career as a model to emulate. Some, such as the later Russian Tsars and German Kaisers, even adopted variations of the name Caesar for their formal titles.

See also: Gauls; *Pax Romana*; Rome.

FURTHER READING

Caesar, Julius. *The Conquest of Gaul*. Trans. S. A. Handford. New York: Penguin Books, 1982.

Gelzer, Mattias. *Caesar: Politician and Statesman*. Trans. Peter Needham. Reprint, Cambridge, MA: Harvard University Press, 2006.

Parenti, Michael. *The Assassination of Julius Caesar: A People's History of Ancient Rome*. New York: New Press, 2003.

Cave Paintings

The naturalistic depictions of animal life, symbols, and humans found on the walls of caves throughout Europe. Cave paintings, an ancient art, were applied by prehistoric humans between 22,000 and 11,000 years ago.

Because most ancient caves in Europe appear never to have been inhabited, scholars assume that the often elaborate and beautiful paintings served **ritualistic** functions. These graphic stories herald the development of human culture, showing the ability for abstract thought and artistic expression.

Among the various forms of artistic representation predating the **Mesolithic Period** (ca. 10,000–6000 B.C.E) in Europe—ranging from beaded jewelry and decorated objects made of stone, ivory, or bone to **petroglyphs** carved on the surfaces of rocks—cave paintings are the most sophisticated examples of prehistoric art. Most of the known caves, clustered in Spain and France, were painted between 18,000 and 10,000 B.C.E., an **era** known as the Magdalenian Period (named for the French site called La Madelaine, where remains of humans dating to this time were discovered). The Blanchard shelter in the Dordogne region of France, however, holds a picture of a horse that is estimated to be 30,000 years old. Other cave paintings survive in Italy, Portugal, Germany, and the Balkans. One of the largest collections of cave paintings appears in the cave of Lascaux in France.

Cave paintings of bison, horses, and deer, such as this one found in the cave of Lascaux in France, inform historians about the lives and habits of Cro-Magnon peoples.
(Prehistoric/The Bridgeman Art Library/Getty Images)

PAINTING THE CAVES

The cave painters employed a wide variety of tools to execute their artwork. They used stone picks or sharp-edged flints to engrave lines into the surfaces. The painters most likely ground their pigments on-site using a mortar and pestle, then mixed them using water and adding vegetable or animal oils to bind the mixture into a spreadable paint. Charcoal probably provided the black, while various minerals or organic materials such as sulfurous rock or iron oxide furnished the other colors, ranging from a reddish ochre to white, yellow, and brown.

Painters either used their fingers or pads, brushes, and stencils made of wood, skin, and hair to apply color to the cave walls. Brushes might be made of twigs, feathers, or leaves. In some cases, the artist blew paint through a blow pipe made of bird bones to apply color to the surface. Sponges made of fur could also be used to fill in colors, and stencils were made by covering an object such as a hand with paint and then pressing it to the cave wall. Preparations for painting were elaborate; the upper walls and ceilings of the caves, for instance, could only have been reached by scaffolding. Torches or lamps, carved into the cave wall or fashioned from blocks of clay and fueled with animal fat, furnished the light by which the painters worked.

The style of the cave paintings developed over time. Some of the earliest cave art, dating to perhaps 30,000 B.C.E., consists of handprints, the outlines of various animals finger-painted with soft clay, and geometric figures and signs. By the time of the later

LINK IN TIME

Lascaux: Then and Now

The cave of Lascaux is located near the town of Les Eyzies in the Dordogne region of southern France. It is the most extensively decorated of all the painted caves from Ice Age Europe. About 820 feet (250 m) deep, the cave was discovered accidentally in 1940 by four local teenagers. The content of the paintings and **radio-carbon dating** of the materials suggest that the pictures were made between 17,000 and 15,000 years ago. At the time, Lascaux would have been the settlement for a small tribe of Cro-Magnon people who built hide shelters, wore clothes of fur, and melted snow in leather containers to obtain water.

Residents depended on animals for food, clothing, fuel for lamps and fires, and materials for preparing food and building shelter. The paintings inside the cave suggest the vital, almost magical, significance of the hunt in their lives.

In the first and largest section of the cave, called the Great Hall of the Bulls, a fresco about 66 feet (20 m) long contains pictures of bulls, horses, and stags. The Hall of the Bulls continues into the so-called Painted Gallery, where pictures covering the upper walls and even much of the ceiling depict horses, bulls, and ibix, or wild goats. A side passage connects the Great Hall to the Main Gallery, the Chamber of Felines, the Chamber of Engravings, and the Shaft of the Dead Man, which displays a portrait of a man facing a bison and a rhinoceros.

After the discovery, the entrance was enlarged and up to 1,200 visitors a day flocked to the site. The carbon dioxide exhaled by so many visitors in the confined space of the cave began to corrode the rock face, and in 1963, the Lascaux cave was closed to the public. The temperature and air in the cave are now monitored daily to help preserve these finest examples of late Stone Age cave art.

paintings at Lascaux (ca. 15,000–13,000 B.C.E.), the portraits progressed from single-colored outlines and silhouettes to life-sized, multicolored figures of animals depicted in stylized ways, often with small heads, big bellies, and short legs. The later examples show an increasing realism and attention to anatomical detail. Certain postures and details of the animals suggest movement, bringing the painting to life. Stylized human figures and tools frequently appear in the paintings as well. Many of the larger caves contain paintings that were completed over several thousand years, suggesting that the painters may have developed a sense of their own history. Perhaps the paintings may have served as a way to preserve tribal memories across generations.

DISCOVERING THE CAVES

These dynamic, detailed, and impressive examples of prehistoric art were first revealed to the modern world in 1869, when a fox hunter discovered the entrance to the cave of Altamira in northern Spain. Due to the startling clarity of the pictures and their state of preservation, the first excavators assumed the scenes had been painted recently. The discovery of more caves in northern Spain and southwestern France soon revealed a vivid and previously unknown artistic heritage dating to the last Ice Age (ca. 70,000–10,000 B.C.E.). More sophisticated means of determining the age of the paintings helped scientists establish their authenticity and proved that many of the animals depicted on the walls, including mammoths, musk-oxen, and the woolly rhinoceros, are now extinct.

The precise purpose and meaning of the cave paintings remains unknown. The first theories assumed that the paintings were an evening pastime for hunters with time on their hands. Later explanations held that the paintings were purely utilitarian,

designed to help educate youths in the practice of hunting. Some of the paintings, however, depict animals that were not hunted and—perhaps more puzzling—animals that were already extinct by the time of the painting. Other theories suggest that the paintings held a magical significance.

In addition to cave paintings, Magdalenian artists decorated rock surfaces in the open air. They may have executed paintings in such locations as well, but no examples have been found.

Other forms of art found in caves throughout Europe, including clay **reliefs** and statues, support the interpretation that these early art galleries were gathering places for rituals that held a symbolic meaning. Perhaps they were meant to ensure a successful hunt and thereby furnish food, clothing, and other materials that a settlement needed. Perhaps these ancient elaborate paintings provided entertainment, furnished subjects for storytelling, and represented a deep connection between humans and the environment on which they depended for survival.

See also: Archeological Discoveries; Art and Architecture; Cro-Magnon Peoples; Culture and Traditions; Ice Age; Religion.

FURTHER READING

Clottes, Jean. *Chauvet Cave: The Art of Earliest Times*. Trans. Paul G. Bahn. Salt Lake City: University of Utah Press, 2003.

Ruspoli, Mario. *The Cave of Lascaux: The Final Photographs*. New York: Abrams, 1987.

Saura Ramos, Pedra A. *The Cave of Altamira*. New York: Abrams, 1999.

Celts

Groups of people who lived throughout eastern, central, and western Europe, extending into Britain and Ireland. Celtic peoples never developed as a unified nation but rather remained a collection of tribes sharing similar language, religion, **material culture**, and beliefs. Ancient Celtic civilization reached its peak of sophistication and influence during the **Iron Age** (ca. 750–100 B.C.E.). Although the mighty Roman Empire (27 B.C.E.–C.E. 476) absorbed many Celtic groups beginning in the first century B.C.E., Celtic languages and customs have survived in Ireland and parts of Britain and France to the present day.

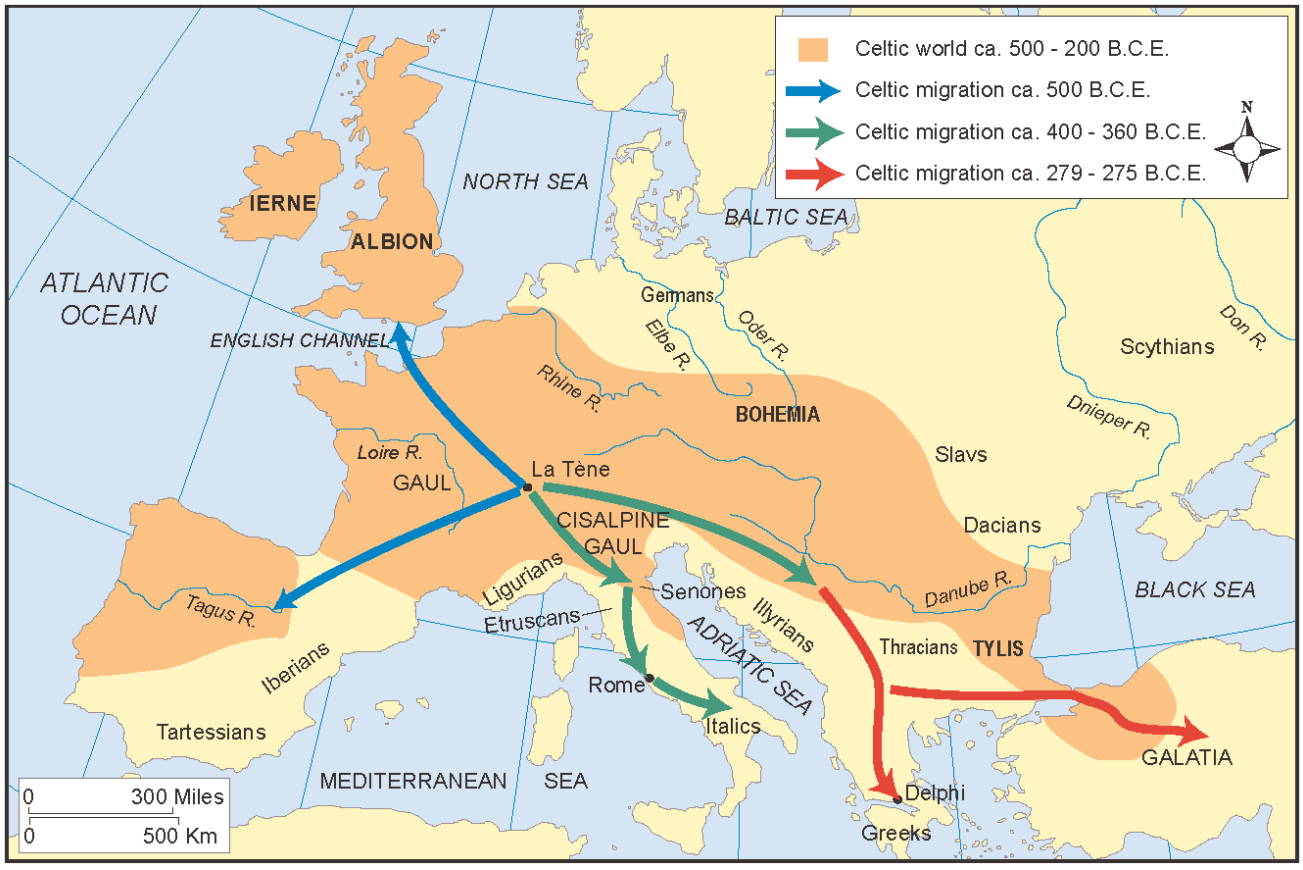
RISE

The Celtic languages evolved from a tongue spoken by groups of Indo-European peoples who originated around the Black Sea and who began to migrate through Europe around 4000 B.C.E. The earliest distinctly Celtic **artifacts** appeared around 1200 B.C.E. in the Alpine region of Austria and Switzerland. Although primarily an agricultural people, the Celts developed a militaristic advantage when, around 800 B.C.E., they learned techniques for making iron tools and weapons and adopted the horse for warfare. Greek historians writing in the sixth century B.C.E. described a warlike people living to the north who called themselves Celts or *Keltoi*, although the philosopher Plato (ca. 427–347 B.C.E.) dismissed them as unprincipled barbarians.

Beginning in the fifth century B.C.E., Celtic tribes migrated west into parts of Spain, Italy, and the British Isles. They also moved south, attacking Rome in 390 B.C.E., and east, reaching Delphi in Greece in 279 B.C.E. and settling in central Turkey. By the beginning of third century B.C.E., Celtic speakers were the most populous group in Europe. As well as being skilled warriors, the Celts were able farmers, **artisans**, and merchants who traded salt, tin, and woolen **textiles** for amber from the Balkans, bronze from Greece and Etruscan Italy, and ivory from Africa.

CELTIC MIGRATIONS

While Celtic groups largely occupied the alpine regions in what is modern-day central France and parts of Spain and Germany in 500 B.C.E., tribes in the next century began to move east, south, and west. By 200 B.C.E., the Celtic world reached its greatest extent, covering central Europe from the western coast of modern-day Ireland as far east as central Turkey.



LIFE AND SOCIETY

The term *Hallstatt* generally refers to the art and architecture of Celtic groups between ca. 1200 and 500 B.C.E., and takes its name from the site of Celtic burial grounds discovered in Austria. The La Tène culture, named for a Celtic site in Switzerland, prevailed between 500 and 50 B.C.E. Throughout this period, most Celts lived on isolated farms and villages or in small hill forts, defensive towns enclosed with stout wooden walls and earthworks of mounded soil and trenches. Most buildings were wooden or wattle-and-daub, made from stripped branches woven together and covered with mud.

The Celtic tribe, or *tuath*, was made up of extended families headed by a chieftain or king who was normally chosen from among the wealthiest families. The chieftain retained a band of skilled warriors whose loyalty he repaid with armor, ornaments, cattle, and land. Along with the Druids—the highly educated priests, judges, and historians of the tribe—the chieftain and his warriors formed the highest class of Celtic society.

Farmers and free landowners belonged to the middle and largest class. A typical Celtic farm had one or more houses, farm buildings, granaries, storage pits, and enclosures for livestock such as cattle, sheep, and goats. Circular one-room houses

sheltered a whole family, all of whom contributed to household maintenance. Men performed the farming duties, using iron axes to cut forests and clear lands for cultivation, iron plows to till the soil, iron hoes to weed and tend their crops, and iron sickles to reap the grain. Women made the grain into bread and beer, the staples of the Celtic diet, and also saw to the weaving and sewing of cloth. Everyday wear consisted of trousers for men and long tunics for women. Outdoor wear was brightly colored, and both men and women proudly wore torcs (neck rings), armlets, and brooches.

The third class in Celtic society was made up of craftspeople, the landless, and slaves, who were customarily captives taken in war. Celtic nobles practiced war in defense of the tribe and also as a way to acquire wealth. Cattle were particularly valuable, so cattle raids between tribes provided opportunities to display courage as well as amass fortunes.

The Celtic religion included a belief in an otherworld in which the deceased would need the objects he or she had acquired in life. Ordinary people were buried in small graves with a few tools, items of clothing and jewelry, and some food to accompany them. Chieftains were buried in large earthen mounds along with a chariot and an assortment of weapons, ornaments, jewels, and decorated vases. The tomb of a Celtic princess unearthed near Vix, France, contained an enormous cauldron standing five feet (1.5 m) tall and weighing 450 pounds (204 kg).

The Iron Age Celts did not have a written language of their own, but surviving Celtic myths provide glimpses into a world where kinship was valued, warriors fiercely defended their honor, guests were treated with great hospitality, and music and poetry were much admired. At the same time, Roman historians such as Livy (59 B.C.E.–C.E. 17) describe the Celts as aggressive warriors who would strip naked, paint their bodies, and rush fearlessly into battle, taking the heads of their enemies as trophies while their women looked on and shouted encouragement.

LEGACY

During the later third and second centuries B.C.E., Celtic groups came increasingly under attack. Migrating Germanic groups uprooted the Celts from eastern Europe, while Spain, Gaul, and Britain all fell under Roman rule by the first century C.E. However, Celtic groups in Ireland, Wales, Brittany, and parts of Cornwall and Scotland remained free from Roman conquest. After the introduction of Christianity and the Latin alphabet, Irish monks of the eighth century C.E. recorded the mythical histories of the remaining Celts, preserving valuable insight into the customs and beliefs of the peoples who had once flourished throughout ancient Europe.

See also: Agriculture; Archeological Discoveries; Art and Architecture; Culture and Traditions; Druids; Gauls; Myths, Epics, and Sagas; Religion; Rome; Slavery.

FURTHER READING

Celts: Europe's People of Iron. By the editors of Time-Life Books. Alexandria, VA: Time-Life Books, 1994.

Haywood, John. *Atlas of the Celtic World*. London: Thames & Hudson, 2001.

James, Simon. *The World of the Celts*. London: Thames & Hudson, 1993.

Litton, Helen. *The Celts: An Illustrated History*. Dublin: Wolfhound Press, 1997.

Scherman, Katharine. *The Birth of France: Warriors, Bishops, and Long-Haired Kings*. New York: Random House, 1987.

Chariots

See Tools and Weapons.

Christianity

Religion based on the life and teachings of Jesus Christ (ca. 4 B.C.E.–C.E. 28 or 30), whose followers believed him to be the son of God and the Jewish Messiah, the prophet who would restore the kingdom of God on earth.

Early Christians compiled oral traditions about the life and teachings of Jesus into accounts called the Gospels, which Christians regard as sacred texts. The Gospels describe Christ's central teachings of repentance and brotherly love and also focus on the cross, the crucifixion and resurrection of Christ, and salvation for those who believe. Christian missionaries spread these teachings throughout the Roman Empire. The Christian Church survived the fall of Rome in C.E. 476 and became the most prominent religion for most of medieval Europe.

BEGINNINGS

Jesus was a Jew who lived primarily in Galilee (today, northern Israel), in what was at the time the Roman province of Judaea (Jerusalem and the surrounding area), which was under the Roman procurator, or governor, Pontius Pilate. Jesus' simple life as a teacher and healer inspired many to follow him. He taught that a person could have a direct relationship with God through prayer, and he upset local Jewish authorities by defying the formal **rituals** of religion. Pilate was concerned that confrontations between Jesus' followers and the Jewish authorities would lead to unrest that might require intervention by Roman soldiers. Local resistance to Roman rule was already fierce, and Pilate feared the possibility of rebellion if he used force against the population. To avert a possible crisis, Pilate agreed to Jesus' crucifixion on a hill outside Jerusalem.

According to the Gospels, written in Greek in the late first century C.E., Jesus appeared to his followers three days after his death. He urged believers to spread the message that God would come to establish a heavenly kingdom on earth, a kingdom which would only admit those who had shown love, forgiveness, and charity to others. The early Christian church developed as these first missionaries traveled around the Mediterranean preaching the message of Christ to love one another, repent, and make ready for his return.

The message spread first within Jewish communities and then reached the non-Jews, called Gentiles. Saul of Tarsus, a Jewish rabbi who converted to Christianity in C.E. 37 and took the name Paul, traveled to many major cities of the Roman Empire, attracting converts. Roman officials sought to suppress the early Christians, regarding them as dangerous because they refused to venerate or worship the emperor. Stephen, a deacon of the church at Jerusalem, became the first Christian martyr when he was stoned to death in C.E. 34, and Paul was executed at Rome around C.E. 58. Persecutions continued throughout the first centuries of Christianity, and mass executions of Christians often turned into public spectacles held in the Roman amphitheatres. In C.E. 303, the Emperor Diocletian ordered all Christian churches destroyed. By that time, however, Christianity had grown into an influential religion, supported by the work of several church leaders.

EVOLUTION

Early Christians gathered in private homes to worship through song, prayer, and ritual meals. These homes were the first Christian churches. Following the lead of St. Peter, one of the original twelve Apostles, or companions of Christ, the head of the

DEVELOPMENT OF CHRISTIANITY, 4 B.C.E.–C.E. 1000

ca. 4 B.C.E. Birth of Jesus in Bethlehem

ca. C.E. 28 or 30 Crucifixion of Jesus in Jerusalem

C.E. 34 Martyrdom of Stephen, deacon of church at Jerusalem

ca. C.E. 37 Saul sees vision on road to Damascus; becomes Paul

C.E. 58 Paul imprisoned at Rome; later executed

C.E. 90 Clement I, the fourth pope, establishes divine authority of Roman Catholic Church; as bishop of Rome and successor of the chief apostles, Clement arbitrated disputes in other churches, exercising authority Roman Catholics see as pertaining to the papacy

ca. C.E. 100 Gospels of the Christian Bible, the New Testament, may have been composed

ca. C.E. 200 Church leaders collect most of the books and other sacred writings that form the Bible's New Testament

C.E. 231 Origen of Alexandria sets up Hexapla, a volume with six parallel translations of the Hebrew Bible, or Old Testament

C.E. 303 Roman emperor Diocletian orders persecution of Christians and destruction of all churches

C.E. 313 Roman emperor Constantine issues Edict of Milan, establishing religious tolerance

C.E. 325 First council of Nicea establishes Christian doctrine, including divinity of Christ

C.E. 380 Theodosius makes Christianity official religion of eastern Roman empire

C.E. 391 Edict bans pagan or non-Christian worship in entire empire.

C.E. 395 Roman Empire splits into Eastern and Western portions with capitals at Rome and Constantinople

ca. C.E. 405 St. Jerome translates Christian Bible into Latin

C.E. 476 End of Western Roman Empire; form of Christianity that develops into the Roman Catholic Church continues at Rome, while another form that develops into the Eastern Orthodox Church continues at Constantinople

ca. C.E. 1000 Last pagan kingdoms in Europe convert to Christianity

church at Rome (that of Peter and Paul) became the pre-eminent spiritual authority for other churches throughout the Roman Empire.

Recognizing Jesus as the Son of God as referred to in the Jewish faith, Christians adopted the Jewish Bible, or Old Testament, written in Hebrew and Aramaic, as the Christian Bible. The Christians added sacred writings about Jesus and his followers—the Gospels, along with the letters of early missionaries—to form the Christian Bible, or New Testament. Some Jewish practices, such as the observance of the Sabbath, or holy day of rest, became part of Christian practice, while other holy days were established to celebrate the life of Christ. The holiday of Christmas, for example, commemorates Christ's birth, while at Easter, Christians remember Christ's death and the idea of his resurrection. By C.E. 200, Church leaders had formally agreed on the major texts that belonged to the Christian Bible, with the exceptions of Hebrews and Revelations. The work of scholars such as Origen, who in 231 compiled six parallel translations of the

books of the Old Testament into several languages, made Christian belief more accessible through written commentaries that could be communicated and studied.

The Christian tenets of love and mercy, charity toward the poor, patience in the face of persecution and suffering, the message of salvation, and the sense of community between members continued to attract people to the church. What had at first been considered a small superstition by the Roman world soon developed into an influential religion with many followers. The place of Christianity in the Roman Empire changed profoundly during the reign of Emperor Constantine I (ca. C.E. 280–337), who became a powerful patron of the early Church.

Until the fourth century, Christianity was illegal in the Roman Empire. In C.E. 313, however, the Roman emperor Constantine (r. C.E. 306–337) passed an Edict of Toleration (also known as the Edict of Milan), granting freedom to all religions. He publicly supported Christianity, granting bishops equal authority with state officers and building churches such as the one at Constantinople, the city he made his capital. Constantine's conversion to Christianity in 337 inspired the conversion of large numbers of pagan Romans and spurred the rapid growth of Christianity in the late Roman Empire.

As the Church developed, leaders met in councils to determine the **doctrine**, or beliefs, that guided the growing institution. For instance, for those who believed, the Council of Nicea in C.E. 325 affirmed the divinity of Christ and the tripartite nature of God as containing God the Father, Jesus the Son, and the Holy Spirit. Writers like Augustine (C.E. 354–430), a bishop of Hippo, also helped formulate Christian belief.

Emperor Theodosius I (C.E. 339–397) made Christianity the official religion of the Roman Empire. After the empire split into western and eastern halves in 395, the churches at Rome and Constantinople developed different practices of Christianity, although the church did not actually split until 1054 and both institutions exerted substantial influence on the kingdoms of medieval Europe. St. Jerome's Latin translation of the Christian Bible (ca. C.E. 405) became the most important document for much of western Europe in the Middle Ages. Patrons such as Pope Leo the Great (r. C.E. 440–461) in the west and the Emperor Justinian I (C.E. 483–565) in the east helped consolidate the power of the church and sent missionaries to the pagan, or non-Christian, peoples of Europe. By 1000, all the kingdoms of Europe were Christian and Christianity remained a fundamental influence on the culture of Europe.

See also: Justinian I; Latin; Religion; Rome.

FURTHER READING

Bokenkotter, Thomas S. *A Concise History of the Catholic Church*. Rev. ed. New York: Doubleday, 2004.

Collins, Michael, and Matthew A. Price. *The Story of Christianity: 2,000 Years of Faith*. New York: DK, 1999.

Partner, Peter. *Two Thousand Years*. Vol. 1, *The First Millennium: The Birth of Christianity to the Crusades*. London: Granada Media, 1999.

Classical Age

See Greece.

Crete

Island in the Mediterranean Sea that served in ancient times as an important trading center for Europe, Asia Minor (modern-day Turkey), and Africa. Crete was also home to the influential Minoan civilization that flourished between 2600 and 1400 B.C.E.

Evidence of agriculture on Crete dates to the seventh millennium B.C.E. Waves of people migrated from Asia Minor to Crete over the next 3,000 years, building settlements of mud and brick and raising cereals, vegetables, goats, cattle, and pigs. The limited area available for farming encouraged the Cretans to pursue sea trade, and the island's location south of the Aegean Sea made it a natural meeting place for Mediterranean trade routes. Contacts with Anatolia, Egypt, and the Near East introduced bronzeworking technology to Crete around 2600 B.C.E., well before the rest of Europe.

By 2000 B.C.E., the inhabitants of the island had developed new metalworking techniques and distinctive art and architecture. Their prosperous cities featured broad streets, spacious houses, and enormous palaces that functioned as centers of entertainment, storehouses for food, and homes for the wealthy. Cretan farmers grew wine and olives, while **artisans** produced wool and woven **textiles**, jewelry, pottery, gems, and other items that they exported. Cretans went to Cyprus to obtain copper and to Spain or Britain for tin. From Egypt came wheat, gold, ivory, papyrus, and also the inspiration for Cretan art, writing, and religion.

The vases, frescoes, statues, and jewels found in the palaces at Knossos, Phaistos, and Kato Zakros suggest that wealthy Minoans enjoyed a gracious, leisurely lifestyle, surrounded with beautiful objects. In addition to Minoan achievements in architecture, and in crafts such as metalworking and pottery, the earliest forms of writing and the earliest code of law to be found in Europe come from the Minoan ruins on Crete.

Although earthquakes regularly destroyed the elaborate palace of Knossos and other monumental Minoan palaces, the Minoans rebuilt Knossos each time on a grander scale, indicating to modern scholars the increasing wealth and power of the Minoan kings. In 1500 B.C.E., a volcanic eruption on the island of Thera (now Santorini) caused earthquakes and tsunamis that devastated the coastlines of Crete and presumably destroyed the Minoan navy. After the disaster, the Mycenaeans of early Greece occupied Crete. Around 1100 B.C.E., the palace at Knossos was finally destroyed by the Dorians, tribes from northern Greece who conquered the Mycenaeans and ruled Crete in the centuries to follow. In 67 B.C.E., the Romans invaded Crete and established a province there; in C.E. 324, Crete became part of the Eastern Roman Empire. By then, the once-great palaces had disappeared beneath other settlements, and only myths remained describing a fabulous civilization on Crete, ruled by the wealthy King Minos.

In 1900, the English archeologist Sir Arthur Evans rediscovered the palace at Knossos and revealed how, millennia before the **Classical** Age of Greece (480–323 B.C.E.), the heritage of Crete formed the cornerstone of European civilization.

See also: Archeological Discoveries; Art and Architecture; Culture and Traditions; Greece; Language and Writing; Minoan Civilization; Myths, Epics, and Sagas.

FURTHER READING

Castleden, Rodney. *Minoans: Life in Bronze Age Crete*. New York: Routledge, 1993.

Willetts, R.F. *The Civilization of Ancient Crete*. Reprint, New York: Phoenix Press, 2004.

Cro-Magnon Peoples

Earliest known species of modern human, or *Homo sapiens*, who appeared in Europe around 40,000 B.C.E. The name Cro-Magnon, derived from Old French and Latin, means "large cavity" and refers to the caves in southern France where their fossils were first discovered. Cro-Magnon remains have also been found throughout northern Spain, France, and Germany.

Cro-Magnon peoples are the ancestors of modern humans, sharing the same physical features, brain size, and capability for intelligence. Their fossils display the facial characteristics of modern-day Europeans, including a vertical forehead, flat (rather than protruding) face, and developed chin. Cro-Magnon peoples differed from the earlier Neanderthal peoples in that they were taller and more slender, with less-prominent brows and smaller teeth. The average Cro-Magnon male stood about six feet (1.8 m) tall.

Some anthropologists, scientists who study human origins and development, speculate that modern *Homo sapiens* migrated from Africa and replaced the existing populations of *Homo erectus*, an earlier species of human inhabiting Europe. Other anthropologists maintain that *Homo sapiens* began to migrate from Africa almost two million years ago and evolved independently but in similar ways in Europe, Africa, and Asia. Modern **genetics** provides evidence for the first theory. Moreover, while the fossil record shows that Neanderthal and Cro-Magnon peoples lived the same areas for a time, modern humans lack the facial structures and other anatomical features that distinguish Neanderthal peoples. Instead, the Cro-Magnon peoples, who had better tools, speech abilities, and the capacity for complex thought, replaced the Neanderthal populations entirely.

Improving on the traditional stone tools of the Neanderthals, the Cro-Magnons developed implements and weapons that allowed for better living conditions and greater cooperation within tribes. Using flint, bone, and wood to make weapons, such as a spear-thrower, or tools, such as a needle for tailoring clothing, Cro-Magnons were better equipped to endure and adapt to changes in climate and food supply. Surviving bits of jewelry, decorated tools, carved objects of bone or horn, and the startling cave paintings of France and Spain demonstrate the capacity for artistic expression.

Cro-Magnon tribes lived in rock shelters at the entrances of caves or in the open, constructing dwellings made of skin and hide pulled over wood or animal bones and lining their floors with river pebbles. Settling near rivers and springs that functioned as water sources as well as gathering places for animals, the Cro-Magnons hunted reindeer, bison, elk, wild ox, horse, boar, and mountain goat. Smaller animals, such as the arctic fox, wolf, beaver, and rabbits, provided meat as well as skins and fur, and birds and fish added to the diet. They learned methods of storing food to survive the long winters. During the warmer months, tribes would congregate with neighbors to arrange marriages and barter for tools and **artifacts**.

Around 12,000 B.C.E., as the climate of Europe began to warm and more land became available, Cro-Magnon peoples migrated across Europe and gradually formed settled communities. Scholars maintain that in terms of speech capability, inventiveness, artistic capacity, and intelligence, Cro-Magnon peoples are the direct ancestors of Europeans today.

See also: Agriculture; Archeological Discoveries; Cave Paintings; Ice Age; Neanderthal Peoples; Society; Tools and Weapons.

FURTHER READING

Kurtén, Björn. *Our Earliest Ancestors*. Trans. Erik J. Friis. New York: Columbia University Press, 1993.

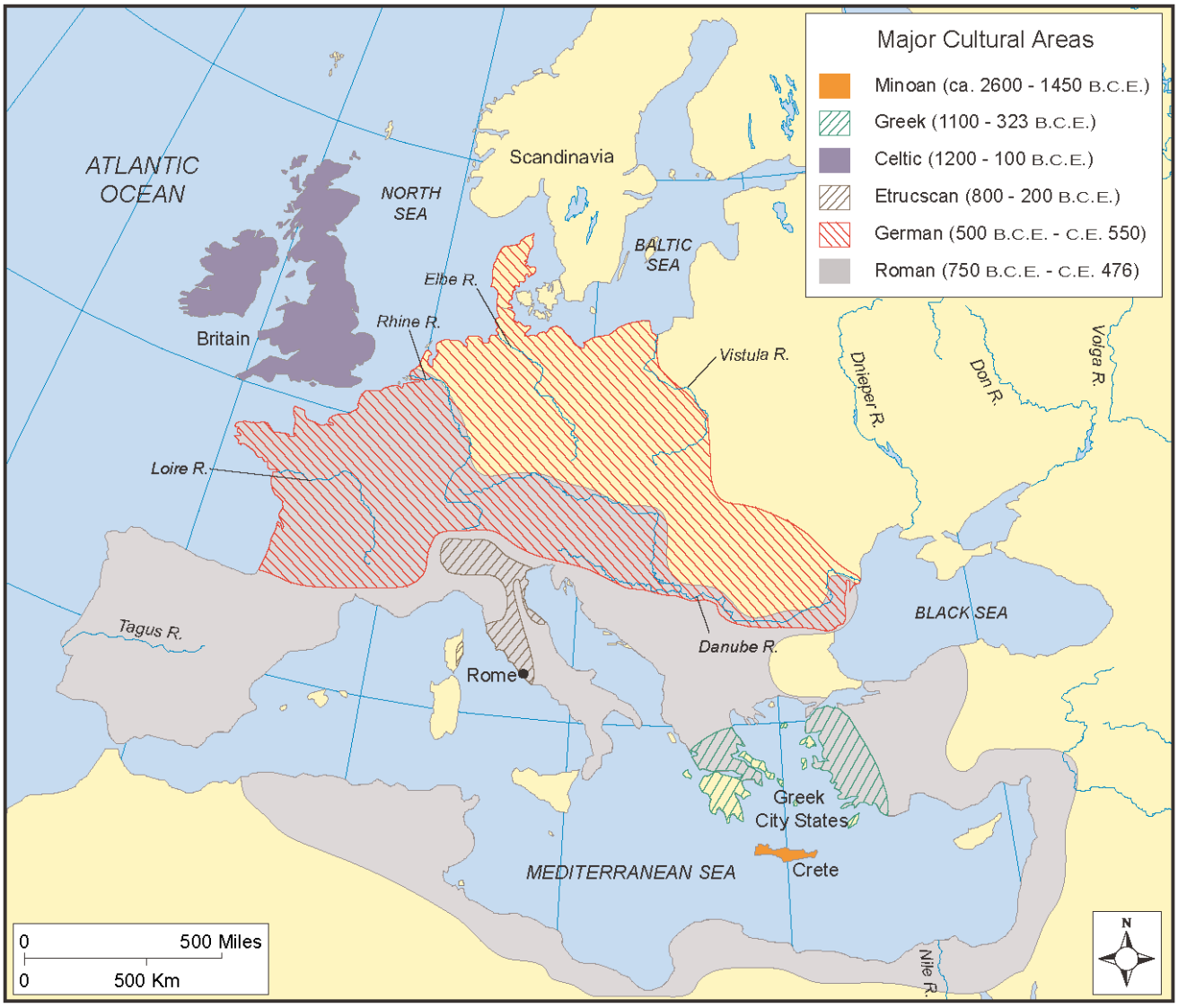
Leakey, Richard. *The Origin of Humankind*. New York: Basic Books, 1994.

Culture and Traditions

Tracing the art, knowledge, beliefs, customs, government, values, and behavioral patterns that characterized early Europeans reveals the unique culture of each group. Traditions show how groups build a sense of communal identity and shared history.

MAJOR CULTURAL AREAS OF ANCIENT EUROPE

Minoan civilization on Crete reached its pinnacle around 1600 B.C.E. Beginning in the eighth century B.C.E., Etruscan civilization flourished in modern-day central Italy, while the first city-states were emerging in Greece. The Celts, who had once inhabited most of Europe, were eventually forced to Brittany, the fringes of Britain, and Ireland. Germanic groups living in Scandinavia and northern Germany migrated east and south, covering southern Europe and spanning from Britain and France in the west to the Balkans in the east.



PREHISTORIC CULTURES OF EUROPE

Archeological discoveries provide the main sources of information about the cultures of prehistoric Europe. Throughout the **Stone Age**, which lasted until the second or third millennium B.C.E., depending on the part of Europe, cultures differed primarily in their technology and inventions.

Stone sculptures of female figures, such as this example found near Willendorf, Austria, which was carved approximately 25,000 years ago and is about four inches (11 cm) high, are thought to have held a powerful religious meaning for Stone Age Europeans. (Erich Lessing/Art Resource, NY)

Archeologists classify cultures of the Stone Age by the tools and weapons they used and frequently name cultures after the sites where the first **artifacts** are found.

Paleolithic Period

Some of the earliest dwellers in Europe belonged to the Clactonian culture, characterized by the use of a crude flint tool called a chopper. The Acheulian culture improved upon this basic implement by sharpening both sides of the flint, producing the more efficient hand axe. Both of these cultures existed during the Lower **Paleolithic Period**, between 450,000 and 100,000 B.C.E.

The Mousterian culture of the Neanderthal peoples dates to the Middle Paleolithic Period (ca. 100,000–40,000 B.C.E.). Members of this culture used flint flakes to make tools and had simple bone implements like spear tips. Grave goods such as tools, animal bones, and even flowers might have been meant to accompany the deceased in the afterlife.

In the Upper Paleolithic Period, beginning around 40,000 B.C.E., diverse cultures emerge in Europe. These Cro-Magnon peoples gradually replaced the Neanderthals who had previously dominated the continent. The Aurignacian culture (ca. 34,000–23,000 B.C.E.) takes its name from the village of Aurignac in southern France, where archeologists found fine flint blades, pendants, bracelets, and ivory beads. The Magdalenian cultures of western Europe (ca. 18,000–10,000 B.C.E.) made art out of bone, antler, and ivory, strung necklaces of sea shells and animal teeth, carved figurines such as the female forms called Venuses, and made the cave paintings at Lascaux and Altamira.

Mesolithic and Neolithic Periods

During the **Mesolithic Period**, many tribes living in Europe abandoned the hunter-gatherer lifestyle in favor of a seminomadic one as they developed fishing practices, made better tools, and gradually domesticated both plants and animals. The earliest

domesticated plants included grains and fruits and, in southern parts of Europe, vine crops such as olives and grapes. Domesticated animals included first the dog and then sheep, goats, pigs, and cows. Mesolithic peoples also had to adapt to a changing climate as the **Ice Age** ended and animal herds diminished. The abundance of mollusk shells in the middens, or refuse piles, of the Ertebolle culture of Denmark shows an increased reliance on fishing.

European culture changed significantly in the **Neolithic Period** with the introduction of agriculture, which arrived around 6000 B.C.E. in parts of Greece and as late as 4000 B.C.E. in outlying areas such as Britain. With the advent of farming, many early European tribes settled land, cultivated farms, raised livestock, and enjoyed such inventions as pottery, weaving, and the wheel. Many Neolithic cultures of Europe are named for the style of pottery they produced, showing the importance of this invention to their ways of life. The Cardium Pottery culture, extending around the Mediterranean in the sixth millennium B.C.E., takes its name from the mollusk used to decorate jars by pressing the shells into the wet clay.

BRONZE AGE AND BEYOND

In the third and second millennia B.C.E., Indo-European tribes began to migrate from their homeland in the Caucasus Mountains. Speaking a language referred to as proto-Indo-European (now lost, but reconstructed using similarities in the languages that developed in the regions they settled), the Indo-Europeans introduced a distinct culture across Europe and into Asia as far as India. Indo-European groups raised cattle and other domesticated animals and adopted the horse as both a means of transport and a military weapon. Theirs was a **patriarchal** culture, where men exerted the chief authority, and their religion featured a series of gods and goddesses who lived in the sky and influenced human events. Most of the existing cultures of Europe have an Indo-European heritage.

The Minoans

The **Bronze Age** in Europe began around 3000 B.C.E. when peoples living near the Mediterranean Sea developed techniques of smelting tin and copper to create bronze. The first true civilization in Europe developed at this time. On the Cyclades, a group of islands in the Aegean Sea, artists worked with the native marble to create severe, abstract sculptures used most frequently in burials, whereas on Crete, the center of Minoan civilization, a palace culture evolved with administrative activities, artist workshops, religious **rituals**, and the royal apartments all housed under one expansive roof. Although daily life for the average Minoan subject was still rather harsh, archeological discoveries indicate that wealthier citizens lived in fine two-story houses, had an abundance of food and wine, and enjoyed musical performances on the lyre or flute or watched young athletes engaged in the sport of bull-leaping.

The culture of Mycenaean Greece supplanted the Minoan civilization; customs and beliefs of this Bronze Age society persisted in tales about the Trojan War and furnished a heroic past for the Greeks of the eighth century B.C.E. as various cities acquired territory and evolved into political entities known as city-states. For the next several centuries, the Greeks thrived as the most sophisticated culture in Europe, leaving their mark on all areas of human endeavor.

The Greeks

Although the governments of Greek city-states varied in type, daily life throughout ancient Greece looked much the same. Extended families lived in small brick houses built around a central courtyard where children could play and, in good weather, food could be cooked outside. Staples of the Greek diet consisted of bread, vegetables, fruit, olives, figs, cheese, and fish. Everyone drank wine, mixed with water, and ate with their hands. The rooms where the ladies of the house lived were separate from the public room where the men entertained guests. The men of the house might hold dinner parties that the women did not attend but at which the children might be invited to entertain guests with music or dance. Girls were educated at home and were expected to bear children who would hopefully survive infancy. Boys typically went to school at age seven. At age 18 they served a required time in the military.

In city-states such as Sparta, where the military played a larger role in the culture, boys began their military training at age seven and did not leave the barracks until age 30. In democratic city-states such as Athens, boys attended schools like Plato's Academy or the Lyceum of Aristotle and then, at 30, were allowed to participate in city government. In Athens, women spent most of their time at home, while Spartan women were allowed to appear in public, participate in the athletic games held to celebrate religious festivals, and inherit land.

The Celts

While the Greeks were flourishing on the Aegean peninsula, tribes of Celts evolved a shared culture throughout most of central, western, and eastern Europe beginning in 1200 B.C.E. Celtic families lived in timber roundhouses where a fireplace in the center was used for heat and cooking. Bread, salted or boiled meat, and seasonal vegetables comprised the Celtic diet, with water or beer for a beverage.

The majority of Celtic citizens were farmers, but tribal chieftains kept and trained a band of warriors to wage occasional raids and defend the village and its livestock. Celtic women were known to lead war bands and serve as queens on occasion. The Celts were great lovers of music and poetry, and no festival was complete without a recitation, preferably of a poem praising the heroic deeds of the tribe's warriors and the beauty of its women. The main Celtic holidays celebrated the changing seasons, welcoming in turn the spring planting, fall harvest, and the new year.

The Romans

Over the course of its history, ancient Rome developed from a small village of mud huts in the tenth century B.C.E. into a sprawling empire that dominated the Mediterranean world. In its earliest years, the native Latin culture of Rome incorporated many influences from the Etruscans, including irrigation methods, building techniques, and religious beliefs. The Romans also acquired an Etruscan love of luxury and ceremonial display.

LINK IN TIME

Celtic Samhain and Halloween Today

The distinction between the earthly and supernatural worlds was at best blurred in Celtic observance. At Samhain, the most important of the seasonal festivals, these borders disappeared entirely. Literally named for summer's end, the holiday, celebrated in early November, marked the beginning of winter, when herders brought animals in from the summer pasture and workers harvested the summer fields, storing food to provide for both humans and animals through the cold weather.

The Celts believed that the normal laws of nature did not apply during Samhain. On the eve of the festival, the dead were said to pass into the world of the living. Celts would leave food outside their homes the night before Samhain to satisfy the roaming spirits and keep them from bringing harm. Bonfires and feasts served as focal points for community-wide celebrations, often involving games and divinations using apples and nuts from the harvest.

The modern holiday of Halloween, or All Hallow's Eve, evolved from this Celtic **ritual**. Members of Christian religions replaced Samhain with the celebration of Hallowmas, or All Saint's Day, which commemorated the souls of new saints. For All Soul's Day parades, on November 2, participants would distribute pastries called soul cakes to those who promised to pray for the souls of dead relatives. This practice developed into the modern custom of trick-or-treating. Halloween is still considered a night when barriers between the natural and supernatural worlds disappear. The practice of dressing up in costume reflects an earlier belief that, if evil spirits come around, a disguise can keep a living person safe.

Under the Roman **monarchy**, which lasted from ca. 753 B.C.E. until 509 B.C.E., much of Rome was organized by extended family, or *gens*. A *curia*, or council of representatives from each family, selected the king, while a senate advised the monarch. The Etruscan king Servius Tullius (r. 578–535 B.C.E.) reorganized Roman society into distinct units called centuries, which served as voting bodies from which he recruited men for the army. The supreme office in the Roman **Republic** was consul, a position shared by two men elected each year. The chief governing body, the senate, had about 300 members. Class struggles between the patrician, or **aristocratic**, citizens and the commoners, or plebeians, were resolved by allowing both classes representation in the senate.

During the second century B.C.E., conquest of the Greek city-states brought Greek cultural achievements into the Roman world. Roman artists and writers developed a body of literature and visual and performing arts following **Hellenistic** models, which included adopting many Greek myths under Roman names. Roman orators such as Cicero (106–43 B.C.E.) raised the art of rhetoric to new levels of sophistication, while historians including Livy (59 B.C.E.–C.E. 17) and poets such as Virgil (70–19 B.C.E.) glorified Rome's militaristic background.

During the early years of the Roman Empire, Romans enjoyed their most stable period. Daily life revolved around the *villa*, a country estate, or the *domus*, the city house. As head of an extended family, Roman fathers exercised supreme domestic authority, holding the power of life or death over their wives, children, and slaves. With few exceptions, Roman women rarely participated in public events.

Poorer Roman residents crowded into multistoried apartment buildings made of wood, where fire was always a hazard. Even though Roman cities featured baths that were free to all male citizens, conditions elsewhere in the cities were rarely sanitary. The harsh conditions under which most Roman citizens lived produced dissatisfaction and, often, civil unrest. Roman leaders frequently tried to deal with these problems by distributing free bread to the poor or hosting chariot racing or gladiatorial combats in the public amphitheaters. By the later days of the empire, much of the public treasury was spent on diversions and public relief intended to placate the masses. In addition, the Roman calendar kept acquiring feast days until, by the fall of the western empire in C.E. 476, there were more holidays than there were days on which legal action or commerce was conducted. Nevertheless, even after the final collapse of the empire in C.E. 476, many kingdoms of medieval Europe retained Roman customs, language, law, and administrative practices in an effort to emulate the glory of imperial Rome.

See also: Archeological Discoveries; Art and Architecture; Cave Paintings; Language and Writing; Myths, Epics, and Sagas; Religion; Slavery; Society; Technology and Inventions; Tools and Weapons.

FURTHER READING

Cunliffe, Barry. *The Oxford Illustrated History of Prehistoric Europe*. New York: Oxford University Press, 2001.

Konstam, Angus. *Historical Atlas of the Celtic World*. Maps by Roger Kean. New York: Checkmark Books, 2001.

Pomeroy, Sarah B., Stanley M. Burstein, Walter Donlan, and Jennifer Tolbert Roberts. *A Brief History of Ancient Greece: Politics, Society, and Culture*. New York: Oxford University Press, 2004.

Wells, Peter S. *The Barbarians Speak: How the Conquered Peoples Shaped Roman Europe*. Princeton, NJ: Princeton University Press, 1999.

Winks, Robin W., and Susan P. Mattern-Parkes. *The Ancient Mediterranean World: From the Stone Age to A.D. 600*. New York: Oxford University Press, 2005.

Druids

Among the ancient Celts, an influential class of people who served as priests, philosophers, judges, diviners, astronomers, and mediators with the gods. Druids largely practiced within the Celtic tribes inhabiting Ireland, Britain, and Gaul during the **Iron Age** (ca. 750–100 B.C.E.), and many Druid sanctuaries were discovered in these areas.

The word *Druid* comes from a Celtic word for oak, a tree featured in Celtic religious observance; oak groves often functioned as Celtic holy places. Because of their long training and the importance of their contributions, Druids occupied a privileged place in Celtic society. For example, they were not required to serve in the military or pay taxes. Druids advised kings and often served as ambassadors to settle disputes between families or tribes. Along with bards and seers, Druids preserved the unwritten lore surrounding astronomy, techniques of divination, and tribal history and traditions. They performed the major **rituals** of Celtic religious practice and were consulted as prophets who could divine the will of the gods through omens that manifested in natural patterns or through animal sacrifice. Roman historians attest that the Druids sometimes presided over human sacrifices.

Druid priests were also teachers and healers. They preserved the codes of law and served as judges to resolve disputes or punish crimes. It is possible that women could perform the functions of Druids, but no real evidence for female Druids exists.

Druid training was rigorous and required learning verses, laws, histories, and other traditions. Julius Caesar (100–44 B.C.E.), a Roman general who encountered the Druids in his wars in Gaul, wrote that Druid novices often were sent to Britain for training that could last up to 20 years. Although they kept calendars to mark feasts and other important days, the Druids chose not to record their knowledge in written form. As a consequence, an aura of mystery surrounded their activities, and they were sometimes said to have magical powers, such as the ability to conjure an enchanted mist or turn into animals. Because of the lack of concrete evidence about them, Druid rituals have always been the subject of speculation. For example, although history shows that Stonehenge predates the Celts, it was once thought that Druids built the **megalith** structure there.

The Roman emperors were hostile to the Druids, perhaps because of the influence they wielded in Celtic society. As a result, Roman authorities made every effort to stamp out Druid practices inside the empire. Believing it a center for Druid schooling, Roman soldiers destroyed the

religious sanctuary on the British Isle of Mona in the first century C.E. Christianity also did not tolerate Druidism, and where the Druids survived in post-Roman Europe (for instance in Ireland), they became more like bards and historians and lost their religious significance.

See also: Celts; Culture and Traditions; Gauls; Religion; Rome.

FURTHER READING

Green, Miranda J. *The World of the Druids*. Minneapolis: Irish Books and Media, 1997.

Matthews, John, ed. *The Druid Source Book: From Earliest Times to the Present Day*. London: Blandford Press; New York: Sterling Press, 1996.

Etruscan Civilization

Culture in central Italy that flourished in the eighth through third centuries B.C.E. Etruscan civilization transformed the landscape of Italy, bringing a style of art, religion, and political organization that would influence the region for centuries to follow.

The precise origins of the Etruscans, who called themselves the *Rasenna*, are the subject of debate. Some scholars believe the Etruscans migrated from Asia Minor in the ninth century B.C.E. Others believe they were native to central and northwest Italy and simply absorbed outside influences. Etruscan art, architecture, burial customs, religious practices, and metalworking techniques all have parallels in the Near East. However, the Etruscan language is non-Indo-European, meaning it does not belong to the family of languages broadly shared through Europe and parts of Asia. Instead, the Etruscans adapted the Greek alphabet and used it for **inscriptions** made in tombs and sanctuaries or on pottery.

The 12 major Etruscan city-states, such as Veii, Pisae, and Tarquinia, in conjunction with a series of larger towns, organized themselves into a federation called the Twelve Peoples. The Etruscans followed a monarchic system of government, in which the highest authority was the priest-king, who inherited his rule and was supported by an **aristocratic** class. The king served as chief judge, military leader, and priest of religious ceremonies. The monarch was chosen from among the noblest families, and great ceremony attended his public appearances. During the seventh and sixth centuries B.C.E., Etruscan civilization reached its height of influence and sophistication.

ART AND ARCHITECTURE

The Etruscans were great architects. Their towns had markets, streets, shops, temples, public buildings, and residential homes. The Etruscan house was built around an atrium, a central space with rooms branching to the left and right. Their cities had wells and underground systems of pipes that supplied drinking water.

The Etruscans built paved roads, some of them broad funerary ways leading to the necropolis, the "city of the dead." They built enormous chamber tombs made of stone and covered them with earth to form large mounds, or *tumuli*. Examples that can still be seen at Cerveteri, outside of Rome, measure up to 130 feet (40 m) in diameter. These underground houses had hallways with doors, false windows, ceilings supported by columns, and rooms furnished with couches and chairs.

Etruscan religious temples were massive and square, fronted by columns. The life-size statues

Colorful paintings, such as these found in the Tomb of the Triclinium at Tarquinia, dated to 470 B.C.E., were meant to help the deceased enjoy favorite pastimes like partaking in banquets, hunting, dancing, and listening to music in the afterlife. (Nimatallah/Art Resource, NY)

of the gods inside were brightly painted, and many had fearsome appearances. Like the Greeks, the Etruscans pictured their gods as having human form.

Etruscan art shows influence from the eastern Mediterranean, Asia, and Egypt. Their figures of gold, silver, bronze, and ivory take the shape of lions, panthers, leopards, ostriches, monkeys, palm trees, and lotus flowers, none of which are native to Italy. Images of mythical creatures, such as the griffin, sphinx, chimera, or winged bull, were also imported from the Near East. In Etruscan tombs, terracotta portraits and wall frescoes—paintings made on wet plaster—portray realistic figures reclining at elaborate banquets, a favorite pastime for a pleasure-loving society. Etruscan **artisans** made gold jewelry using a process of granulation or connecting tiny balls of gold. This skill at detailed work also had practical applications: The Etruscans were experts at dentistry. Some people buried in Etruscan tombs had false teeth or even dentures.

LIFE

The Etruscans also introduced new methods of cultivation and irrigation. They cleared forests and drained swamps to make room for fields of wheat, flax, millet, rye, oats, or grape vines. They fished the coasts and raised sheep, horses, and pigs. To supplement their diet they hunted hare, birds, deer, or black boar. Like many agricultural societies, they used a lunar calendar to keep time and record religious festivals.

The Etruscans enjoyed wealth and finery; they traded their distinctive glossy black pottery called *buchero* for luxury goods from the Greeks, Phoenicians, Egyptians, and Carthaginians. Their clothing was elegant and colorful. Women wore long embroidered dresses draped with cloaks and jewelry; men wore belted jerkins (sleeveless jackets) or togas with cloaks. Hats and footwear in the form of boots or sandals completed the costume.

Etruscan paintings indicate, among other things, the importance of music to Etruscan culture. Instruments depicted in these paintings include horns, such as the trumpet, and stringed instruments, such as the lyre, but the most popular instrument was the flute. The flute accompanied all aspects of life: work, meals, play, and even hunting. The Etruscans also enjoyed games and would host grand spectacles with boxers, wrestlers, javelin- and discus-throwers, dancing, and horse- and chariot-races.

GREAT LIVES

Tarquin

Tarquin was the family name of a dynasty of Etruscan kings who ruled Rome until 509 B.C.E. while it was still a growing city-state. The city, called Tarquinii in Latin, located in central Italy, was a center of prosperous commerce with the Greek colonies on the Italian Peninsula, trading precious metals for objects made of pottery and glass. The Tarquin clan did not originate in the region called Etruria; the father of the first king supposedly came to Tarquinii from Corinth, a Greek city, and married an Etruscan noblewoman. Their son Lucumo moved to Rome with his wife Tanaquil, also of the Etruscan aristocracy. In 616 B.C.E., Lucumo became Rome's king. Taking the name Lucius Tarquinius Priscus, Tarquin the Elder brought the region of Latium under Roman control and introduced into Roman life many aspects of Etruscan civilization, including certain political practices, religious elements, and ceremonial practices and art forms.

Following the first Tarquin's assassination in 579 B.C.E., Tanaquil engineered the rise of her Etruscan son-in-law, Servius Tullius, to the throne. Previously, the citizens of Rome had elected their king. Servius Tullius expanded the military, reorganized the political administration of Rome, and expanded the borders of the city to encompass several of the neighboring hills. He also began the practice of taking a census, or counting the population, to assess Rome's military capabilities. To celebrate his good fortune, Servius commissioned a grand temple to the Roman goddess Diana. Nevertheless, malcontents assassinated him in 535 B.C.E. in a conspiracy headed by his brother-in-law Tarquinius Superbus, son of Tarquin the Elder, and his own daughter Tullia, Tarquinius' wife.

Tarquin II, known to history as Tarquinius Superbus or Tarquin the Proud, and the most infamous of Tarquin kings, ruled the most powerful kingdom in Italy. He extended his territories, demanded tribute from Rome's neighbors, and commissioned public works, including a temple dedicated to the Roman god Jupiter and a sewage system for the capital city. Tarquin II also famously disregarded the advice of the senate, the body of noblemen whose duty it was to advise the king, which inevitably led to revolt.

In 509 B.C.E., a group of aristocrats banded together and expelled Tarquin the Proud from the city. The exiled king enlisted the support of the King of Etruria to help him return to power, but the bid failed. The triumphant nobles established the Roman Republic, which survived until another rebellion in 27 B.C.E.

Given that much of the early history of Rome is undocumented, scholars question many aspects of the Tarquin family story. Many view the legends as political propaganda designed to enhance the reputation of the Republic. According to the Roman historian Livy (59 B.C.E.–C.E. 17), the rebellion began when Tarquin II's son, Sextus Tarquinius, raped a noblewoman named Lucretia, the wife of a powerful Roman lord. After revealing what had happened, Lucretia stabbed herself, and the tragedy spurred her outraged family to demand justice. Many subsequent works of literature took the rape of Lucrece (Lucretia in Latin) as their subject, and the legacy of Etruscan civilization persisted long after Etruria had fallen to the might of Rome. Later historians regarded the overthrow of the Roman monarchy in favor of a republic as a pivotal moment in European history.

DECLINE

From about the late ninth century B.C.E. to the late sixth century B.C.E., the Etruscans had a significant naval presence, sharing the Mediterranean Sea with the Phoenicians and Greeks. In the sixth century B.C.E., a series of Etruscan kings ruled

Roman prince Tarquinus Sextus leaves his post at Ardea to meet Lucretia, the wife of a senator. Roman historians cited Sextus's assault on Lucretia as the reason Roman citizens exiled their king and established the Republic. (Cameraphoto Arte, Venice/Art Resource, NY)

Rome, a growing city to the south. In 509 B.C.E., however, the Roman populace banished King Tarquin the Proud and set up a **republic**. In the fifth century B.C.E., the Etruscans started losing battles for trade rights to the Greek colonies in the south of Italy. Beginning in the fourth century, they suffered invasions from Roman tribes in the south and from Celts in the north. The great alliance of the Twelve Peoples began to break apart into independent city-states. In 396 B.C.E., the Romans captured the Etruscan city of Veii, about 12 miles (20 km) north of Rome. Thereafter, the Roman Republic expanded at the expense of the Etruscan city-states.

As the Romans took over Etruscan lands, they absorbed elements of Etruscan culture, including architecture, religion, entertainments, and even dress. By the beginning of the Roman Empire (27 B.C.E.), the Etruscan language was no longer spoken. The Etruscans had all but disappeared, leaving only their art and their monuments as clues to the first advanced culture in Italy.

See also: Art and Architecture; Culture and Traditions; Language and Writing; Religion; Rome.

FURTHER READING

Borrelli, Frederica, and Maria Christina Targia. *The Etruscans: Art, Architecture, and History*. Ed. Stefano Peccatori and Stefano Zuffi. Trans. Thomas Michael Hartman. Los Angeles: Getty Trust Publications, 2004.

Haynes, Sybille. *Etruscan Civilization: A Cultural History*. Los Angeles: J. Paul Getty Museum, 2005.

Spivey, Nigel. *Etruscan Art*. London: Thames and Hudson, 1997.

Franks

Germanic group that settled in what is now France after the decline of the Gauls in about C.E. 400. Merging the legacies of imperial Rome and the practice of Christianity with native traditions, Frankish rulers established one of the most influential kingdoms of early medieval Europe.

The first Franks are documented as living near the Rhine River in the second century C.E. Roman sources referred to them as a loose confederation of tribes who banded together out of political necessity and probably called themselves Franks after their word for "brave" (and later, "free"). The early Franks resisted the spread of the Roman Empire, but throughout the fourth century C.E., Franks served in the Roman military and as officials in Roman government. In the mid-fourth century, the Roman emperor Julian settled a group of Franks in the Netherlands as a buffer state between the Roman province and its challengers.

As Roman power weakened, the Franks spread further into Belgium and northern France, developing a culture that combined Germanic customs with Roman influence. In the mid-fifth century, the Frankish chieftain Chlodio led uprisings that gained the adherence of other Frankish groups. A kinsman of Chlodio, Merovich, gave his name to the dynasty—the Merovingian dynasty—established by his successor, Childeric I (r. C.E. 460–482). The members of the family distinguished themselves by not cutting their hair; thus, the Merovingians were called the "long-haired" kings.

Childeric's son Clovis (r. C.E. 481–511) won military victories that brought other Germanic groups under the leadership of the Franks. Frankish rule patterned its offices and systems of administration, such as tax collection, on pre-existing Roman models. Around C.E. 510, Clovis issued the Salic Law, a codification written in Latin and borrowing from Roman legal tradition. A large portion of this code aims to restrict feuds or revenge by establishing fines and penalties for offenses, rather than calling for physical retribution against offenders.

Apart from his legal efforts, Clovis's tactics for keeping control often included killing relatives who displeased him. This helped establish the precedent of the king's absolute power, exercised despite the advice of a council. The unquestioned authority of kings—most of whom claimed that their power was an expression of the will of God, or "divine right"—became a mark of the system of feudalism in the European Middle Ages. The Franks essentially viewed the kingdom as the property of a powerful man, who could distribute it among his heirs.

In addition to leading military conquests and maintaining a centralized form of government, Clovis took control of southern Gaul in C.E. 507 when he defeated the Visigoth king Alaric II. Clovis converted to Christianity to gain the support of the Christian Gallo-Romans, extending his control, as well as Roman tradition, throughout France. Winning various military engagements, Clovis's heirs added to Frankish possessions in modern-day Belgium, Germany, and Austria.

The Frankish empire reached the height of its extent and influence under Charles the Great, known as Charlemagne (r. ca. C.E. 768–814). By this time, various legends had arisen to describe the history of the Franks. In one version, the first tribe migrated to France from the Black Sea under the leadership of a chieftain named Franko around II B.C.E. In another version, the Franks were descendants from exiles of the Trojan War.

See also: Gauls; Germanic Groups; Huns; Religion; Rome.

FURTHER READING

Geary, Patrick J. *Before France and Germany: The Creation and Transformation of the Merovingian World*. New York: Oxford University Press, 1988.

Gregory of Tours. *The History of the Franks*. Translated by Lewis Thorpe. Reprint, New York: Penguin Classics, 1976.

James, Edward. *The Franks*. New York: Blackwell, 1988.

Gauls

Ancient Celtic groups that populated modern-day France between about 500 and 50 B.C.E. Gaul became a chief province of the Roman Empire and the blend of Gallic and Roman culture influenced the later peoples of France, including the Franks.

Groups of Celts migrated into modern-day France in the first millennium B.C.E. and integrated with the prehistoric peoples who lived there. They established villages and built trade routes with towns along the Mediterranean Sea, including the Greek colony of Massilia (Marseille), founded around 600 B.C.E. Although they shared similarities in language, art, and religion, the various tribes were often at war with one another. The capitals of these tribes evolved into the first Gallic towns; Paris, for instance, took its name from the Parisii people. Gallic art shows the influence of the **classical** world, and the Gauls began to circulate coinage in the third century B.C.E. Gaul was full of sites for Celtic worship, wherein Druids presided over sacred **rituals**.

In 390 B.C.E., Gauls under the leadership of Brennus laid siege to Rome, whose citizens, legend has it, bought them off with a thousand pounds of gold. During the following centuries, Gauls fought several battles against the Romans. In 218 B.C.E., many Gauls joined the march of the Carthaginian general Hannibal as he advanced on Rome during the Second Punic War.

The Romans established a province in southern France after a Gallic defeat in 121 B.C.E. Julius Caesar's seven-year-long Gallic wars, beginning in 58 B.C.E., resulted in making all of Gaul a Roman province. After Caesar shattered Gallic resistance by killing the young leader Vercingetorix, the new province of Gaul expanded to include modern-day France, southern Holland, Belgium, most of Switzerland, and Germany west of the Rhine River.

Roman occupation of Gaul lasted for five centuries, during which the province became one of the most profitable territories of the empire. Under Roman influence, the Celtic models of hereditary kingship transformed to an organization of elected magistrates and councils. The Romans introduced a new legal system, a standing army, a network of roads, and a capital (in Lyons). They established the villa structure, wherein extensive farmlands surrounded a great house, or villa, and they turned the native capitals into great cities. The Romans also brought a common language; all of Gaul came to speak Latin, which replaced the earlier Celtic speech.

For the most part, Rome tolerated the native religion in Gaul by associating the local divinities with Roman ones. Greek missionaries brought Christianity during the first and second centuries C.E. The first organized Christian community appeared in Lyons, but during the second and third centuries it suffered persecution from the emperors Marcus Aurelius and

GREAT LIVES

Hannibal

Hannibal Barca became known as "the Great" for the military genius he displayed in fighting against the Roman army in the second of the Punic Wars (218–202 B.C.E.). Hannibal was born in 247 B.C.E. and his family moved to Spain, which then belonged to Carthage, a powerful city in North Africa. In 221 B.C.E., Hannibal became general of the Spanish forces, and in 218 B.C.E., he crossed the Alps and marched into Gaul (modern-day France) with a company of troops and elephants to make war on Rome, the enemy of Carthage. In the battles to follow, Hannibal was never defeated, but he was eventually called home after Carthage was attacked by the Roman general Scipio Africanus. Hannibal retreated to the east, and in 182 B.C.E., he committed suicide by drinking poison to avoid capture by Roman soldiers. Hannibal's military strategies and his ability to win loyalty from his troops led to his being considered one of the greatest generals in European history.

Septimus Severus. Despite these hardships, the Christian church survived in Gaul, growing steadily after Emperor Constantine the Great (r. C.E. 306–337) issued the Edict of Milan in 313, which proclaimed official toleration of all religions in the empire.

When Roman garrisons withdrew in the early fifth century C.E. to resist attacks in the south, Gaul was invaded by Tartars and Huns from the Balkans, Goths and Visigoths from eastern Germany, Allemani and Burgundians from southern German and Switzerland, and the Salian Franks from northern Holland. In a treaty made in 475, the Visigoth ruler Euric was made ruler of Gaul not as a Roman federate but as an independent state. Subsequently, Gaul became part of the Frankish empire, but its **material culture** and political and civil organization remained patterned after Roman models well into the Middle Ages.

See also: Caesar, Gaius Julius; Celts; Culture and Traditions; Druids; Franks; Greece; Religion; Rome.

FURTHER READING

Caesar, Julius. *The Conquest of Gaul*. Trans. S. A. Handford. New York: Penguin Books, 1982.

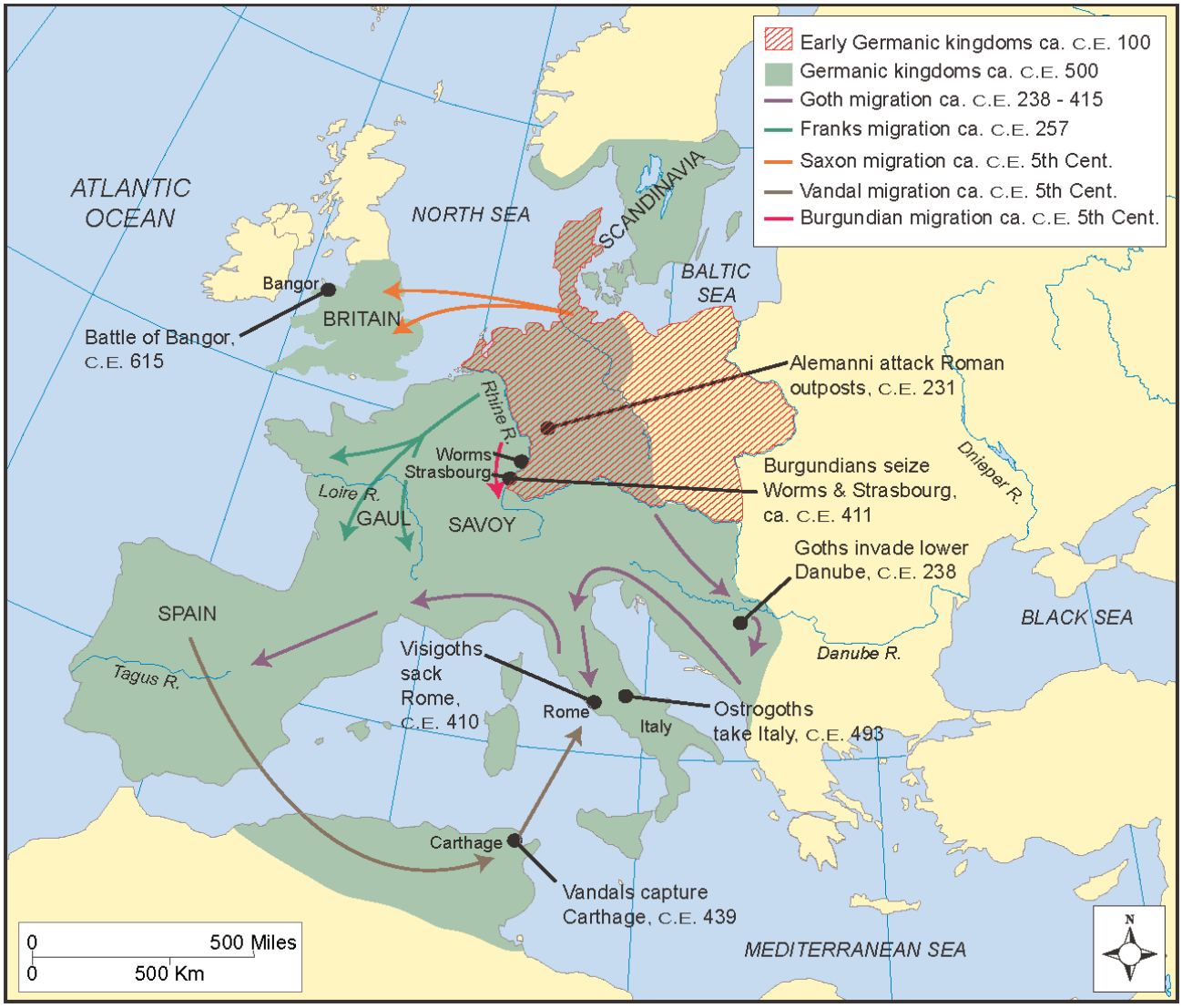
King, Anthony. *Roman Gaul and Germany*. Berkeley: University of California Press, 1990.

Germanic Groups

Ancient tribes populating central and northern Europe from about 2000 B.C.E. that shared a similar language, political organization, set of religious beliefs, and **material culture**. After the Roman Empire collapsed in C.E. 476, Germanic groups took over the western provinces of Rome and established the new empires of the European Middle Ages.

The Germanic groups generally are classified by region: the North Germanic peoples inhabited Scandinavia; the East Germanic peoples included the Goths, Burgundians, and Vandals; and the West Germanic peoples included the Franks, Saxons, Bavarians, and Alemanni. The Germanic groups first came into conflict with Rome in the late first century B.C.E., resisting the spread of Roman influence in Gaul (modern-day France) and Iberia (modern-day Spain). Germanic soldiers were often hired into the Roman army as mercenaries because of their fighting abilities.

MIGRATIONS OF GERMANIC GROUPS: *The Germanic groups proved uneasy neighbors to the ambitious Roman empire. In the third century C.E., groups of Goths, Franks, and Alemanni attacked Roman outposts in Gaul and Germania. By C.E. 500, all the lands once belonging to the western Roman Empire had become home to migrating Germanic groups such as the Saxons, Vandals, Burgundians, Visigoths, and Ostrogoths.*



Evidence of Germanic languages in southern Scandinavia dates to about 2000 B.C.E., suggesting that the tribes originated in this region. By 1200 B.C.E., Germanic settlements were established in modern-day Denmark and northern Germany. By the beginning of the **Iron Age** in northern Europe (ca. 600 B.C.E.), Germanic peoples occupied the plain between the Rhine and Oder rivers. The Jastorf culture in this area, named after an archeological find near the town of Jastorf in northwestern Germany, shared similarities in art and ironworking with the Celtic cultures in southern and western Germany. Beginning in 500 B.C.E., Germanic tribes began to migrate south and east. These migrations

continued throughout the rise and fall of the Roman Empire, spurred sometimes by internal conflicts or by pressures from outside forces, such as invasions by the Huns in the fourth and fifth centuries C.E.

The tribes referred to as the Germanic groups did not share a sense of collective identity. When necessary, clans or tribes would unite to share resources or fight a common enemy, but for the most part clans had separate identities and called themselves by different names. Individual groups or tribes were united by ties of family or friendship and often believed in a shared ancestor, usually a deity.

DAILY LIFE

The chief occupations among most of the Germanic groups were cattle-raising and ironworking, similar to those of their neighbors the Celts. In a typical Germanic settlement, people constructed villages of timber houses where they and their domestic animals lived under the same roof. Farmers planted crops of grains, legumes, and flax and raised pigs, sheep, goats, horses, and other livestock. Wild animals such as deer, boar, and wild cattle provided meat, hides, and horns. The number of cattle a family possessed was a mark of social prestige, indicating wealth and status.

In their everyday lives, the Germanic peoples used ceramic bowls and utensils, shaping handworked clay to make pots, ladles, and jars of various sizes, which they ornamented with simple geometric designs and fired over open wood fires. Women were mainly responsible for domestic tasks and the making of household implements as well as weaving, spinning, and producing clothing. Women typically wore long, sleeveless gowns over a blouse and undergarments. The gown fastened at the shoulder with a brooch and at the waist with a belt. Men wore trousers, smocks, and cloaks. Both men and women wore fur wraps or cloaks fastened with a brooch called a *fibula*. Leather was used to make shoes and caps.

The most sophisticated craft of the Germanic peoples was ironworking. The ability to smelt iron and work it into weapons meant that most Germanic men could be armed, an important feature in a society whose economy and identity were based on warfare. Most of the Germanic groups produced only those goods needed to be self-sufficient and did not manufacture goods for trade. Commerce took place between individuals and groups in the form of gift-giving, which reinforced prestige and power. It was more important to be able to give gifts than to receive them.

Germanic warriors also gained prestige through raiding and warfare, primarily stealing cattle and slaves. Raiding went on between tribes and between feuding clans within tribes. Clans were related through blood ties that forbade marrying or feuding with close kin. Between clans, however, disputes were often settled through revenge and feuding. Warriors were obligated to participate in interclan warfare on behalf of their kin, and had to exact revenge if a member of the family was injured or killed. In some cases, the injury was settled by paying a fine or man-price called *wergild*. Feuds were forbidden during religious holidays, during tribal gatherings or assemblies, and during military expeditions. Anyone who violated these rules would be declared an outlaw, literally outside the protection of the clan.

Political organization varied among tribes, but in most cases the warriors selected a prince or king from one of the leading families. The king combined the authority of military chief and religious head and ruled along with a democratic assembly of warriors. Assemblies of free male warriors were called upon when necessary to resolve disputes. During the *thing* (the name given to the meeting of the assembly), conflicts were resolved and tribal ties reinforced.

Free men and women comprised the largest class in Germanic society. Men served as the heads of families, clans, and tribes, and fathers had authority over their wife, children, and slaves. Some men had multiple wives if they could afford to support them. Prisoners of war served as slaves, producing food and **textiles**, tending cattle, and working as household domestic servants.

GERMANIC GROUPS AND THE ROMAN EMPIRE

ca. 2000 B.C.E. Germanic peoples settle in southern Scandinavia

ca. 1200 B.C.E. Germanic groups established in modern-day Denmark

ca. 1000 B.C.E. Jastorf culture established in northern Germany

ca. 500 B.C.E. Germanic groups begin migrating south and east

ca. 200 B.C.E. First contact between Germanic groups and Roman Republic

ca. 100 B.C.E. German groups repelled from Roman Italy

C.E. 9 Germanic revolt fixes Roman borders at Rhine

C.E. 268 Alemanni invade northern Gaul

C.E. 355 Roman general and future emperor Julian grants land to the Franks

ca. C.E. 370 Ostrogoths fall under control of Huns

C.E. 406 Mixed Germanic groups launch combined invasion of Roman Empire

C.E. 410 Visigoths sack Rome

ca. C.E. 454 Theodoric the Great, future king of Ostrogoths, born

C.E. 455 Vandals sack Rome

C.E. 476 Odoacer forces Emperor Romulus Augustulus to abdicate; end of Roman Empire in the West

THE GERMANIC GROUPS AND ROME

Contacts between the Germanic world and Rome began in the second century B.C.E. Roman governors exported iron, grain, and luxury goods to the Germanic tribes in return for military service. Roman officials often hired German warriors to fight in the army or paid Germanic tribes, like the Franks, to act as buffer states on the edge of the expanding Roman Empire. Despite frequent battles, the Roman armies never succeeded in subduing or civilizing the peoples they referred to as barbarians.

By the third century C.E., German mercenaries comprised the bulk of the Roman army. Germanic invasions of Italy became more frequent; an attack by mixed Germanic groups in C.E. 406 was followed four years later by the sacking of Rome at the hands of the Visigoths. A Germanic group called the Vandals sacked the city again in 455. After a dictate by the Roman emperor displeased them, German mercenaries elected their own king, Odoacer, who forced Emperor Romulus Augustulus to abdicate in 476. This brought an end to the Roman Empire in the west. By the sixth century, all of the western provinces of the Roman Empire had become Germanic kingdoms.

See also: Culture and Traditions; Franks; Language and Writing; Myths, Epics, and Sagas; Norsemen; Odoacer; Rome; Society; Tools and Weapons.

FURTHER READING

Heather, Peter. *The Goths*. Reprint, Malden, MA: Blackwell, 1998.

Todd, Malcolm. *The Early Germans*. 2nd ed. Malden, MA: Blackwell, 2004.

Wells, Peter S. *The Barbarians Speak: How the Conquered Peoples Shaped Roman Europe*. Princeton, NJ: Princeton University Press, 1999.

Goths *See* Germanic Groups.

Greece

Based around the Aegean Sea, the ancient region that covered the Aegean peninsula, its islands, and the coast of modern-day Turkey. Reaching the height of its influence in the first millennium B.C.E., Greek civilization had a profound effect on later Western culture. Many of the principles underlying European ideas about art, literature, philosophy, architecture, education, science, and political organization had their origins in **classical** Greece.

THE FIRST GREEKS

The first inhabitants of Greece, the Achaeans, descended from Indo-European tribes that originally inhabited the Caucasus and what is now northern Iran. The Achaeans first settled in Greece around 1900 B.C.E. From their capital at Mycenae, they traded with the Minoan civilization on Crete, and with Cyprus, Egypt, Scandinavia, and Britain. Mycenaean civilization flourished between 1600 and 1100 B.C.E., a period sometimes referred to as the Heroic Age of Greece.

Around 1100 B.C.E., Mycenae fell to attacks from the Dorians, a warrior people to the north whose horses, fighting chariots, and iron weapons made them superior in combat to the **Bronze Age** Mycenaeans. Following the Dorian invasions, the Phoenicians became the leading naval power of the Mediterranean Sea, while Greece entered a time known as the Dark Age, marked by a relative decline in art, architecture, and the production of jewelry, pottery, and other domestic objects.

Around 750 B.C.E., Greece experienced a rebirth in economic activity. Cities grew in size as trade in pottery, **textiles**, and weapons expanded through the Mediterranean. Greeks migrated from the mainland to the Aegean islands and the western coast of Asia Minor, called Ionia. Greek settlers also established colonies in Italy, Sicily, around the Black Sea, and in Macedonia and Thrace, territories to the north and northwest of Greece. During the eighth century B.C.E., many scholars believe, Homer composed his epic poems the *Iliad*—about the Trojan War—and the *Odyssey*—about the adventures of the hero Odysseus after the Trojan War. By 500 B.C.E., Greeks—who called themselves *Hellenes*—had settled all around the Mediterranean Sea, from the Strait of Gibraltar to the Black Sea. The word *Greek* comes from the Roman word *Graeci*.

THE ARCHAIC AGE

Traditionally, recorded Greek history begins in 776 B.C.E., the year of the first Olympiad, the games held to honor the chief Greek god, Zeus. The interval from the first Olympiad to the end of the Persian Wars in 480 B.C.E. is often called the Archaic Age, based on the style of art and architecture that evolved during this time. These years witnessed the evolution of the Greek *polis* or city-state, a political entity comprised of a city and its surrounding territory. City-states were ruled independently as monarchies, oligarchies run by wealthy nobles, or, in the case of Athens, democracies where political officials were elected by the *demos* or voting public. Increased trade spurred the growth of the merchant class within the various city-states. Meanwhile, **artisans** began to gain influence as more people had wealth and leisure time to indulge in luxuries as a result of the widespread use of slaves.

TURNING POINT

Democracy in Athens

The *polis*, or city-state, was a political body that evolved in ancient Greece and that consisted of a city and its surrounding territory. Greek cities were notoriously independent and had various forms of self-government. In the fourth century B.C.E., more than 1,000 Greek communities had some version of self-rule concentrated either in the hands of rich, **aristocratic** nobles (an oligarchy) or the people (the *demos*).

Athens was the first city-state to develop a system of democracy. In 594 B.C.E., the head of the Athenian government, Solon (ca. 638–559 B.C.E.), made it possible for middle- and lower-class citizens to vote in the People's Assembly. He also organized a ruling council open to more classes and set up a court system where defendants were heard by a jury of their peers.

The People's Assembly served as the governing body of democratic Athens and was open to all adult male citizens. The assembly met up to 40 times a year to debate and vote on the agenda prepared by the council, a committee of 500 who carried out the decisions of the assembly. Councils were chosen by lot among qualifying citizens who served for one year. Ten military generals were also elected each year.

The success of the democracy depended on its balance of power. Anyone suspected of ambition would be ostracized, a decision whereby the assembly voted to banish someone from the city for 10 years. When Sparta defeated Athens in the Peloponnesian War (431–404 B.C.E.), **oligarchy** replaced Athenian democracy. Democratic institutions disappeared as the Greek world came under the rule of Alexander III, the Great (356–323 B.C.E.), and did not reappear in Europe until the Renaissance.

The Classical Age of Greece (480–323 B.C.E.) is also called the Golden Age because of the cultural advancements made during this period. Athens in particular became home to many of the finest Greek authors, historians, teachers, orators, and politicians. Their aesthetic ideals and achievements in philosophy, literature and drama, visual art, and political thought would have an indelible influence on Western civilization.

During this Golden Age, Hippocrates (460–377 B.C.E.) revolutionized medicine with his careful study of the human body and his belief that illnesses had physical, not supernatural, causes. The arts and literature flourished; dramatists Aeschylus (525–456 B.C.E.), Sophocles (496–406 B.C.E.), and Euripides (480–406 B.C.E.) wrote their great tragedies; Pindar (518–438 B.C.E.) his poetry; and Herodotus (fifth century B.C.E.) and Thucydides (ca. 460–ca. 400 B.C.E.) their histories. People of classical Greece enjoyed the performing arts, sports, and other entertainments. The architecture of theaters, temples, and public spaces reflected the classical ideals of symmetry and balance. The circulation of currency encouraged trade, and Athens in particular built a powerful navy.

Religion played an important role in daily life. The Greeks believed that a diverse **pantheon** of gods, goddesses, and other powerful spirits influenced all aspects of life, and frequent **rituals**, festivals, and special offerings were conducted to seek the gods' favor. Elaborate temples were dedicated to the particular patron of a town; for example, the Parthenon in Athens glorified Athena, goddess of wisdom. The **oracle** at Delphi, dating to 1400 B.C.E., was for centuries the most famous and important shrine in Greece. During the Classical Age, scholars and pilgrims came from all over Europe to consult the priestess there, who was said to be in the service of Apollo, the god of the sun as well as music and poetry, and who would answer questions with mysterious prophecies.

HELLENISTIC AGE AND BEYOND

In 338 B.C.E., the Macedonian king Philip II (382–336 B.C.E.) defeated a coalition of Greek forces and

During the Golden Age, the splendid Acropolis functioned as the center of public and religious life for Athenian citizens. The marble Parthenon, dedicated to the goddess Athena, remains an eloquent example of the architecture of classical Greece. (George Grigoriou/Stone/Getty Images)

brought an end to the independence of the city-states. The rule of Philip's son, Alexander III, the Great (356–323 B.C.E.), introduced the **Hellenistic** age. Alexander's conquests spread Greek culture into Egypt and Persia, but after his death, the fates of the city-states fluctuated with the dynastic struggles between Alexander's successors.

Following Macedonian rule, with the destruction of Corinth in 146 B.C.E., all of Greece was conquered by the growing **republic** of Rome. Romans adopted the language, alphabet, art, and learning of the Greeks, spreading these ideals as far in the west as Alexander had in the east. Under Roman rule, the Greek economy stabilized and the ravaged province enjoyed the effects of the *Pax Romana*, or Roman Peace (27 B.C.E.–C.E. 180).

In C.E. 330, the Roman Emperor Constantine the Great (ca. C.E. 280–337) made the Greek city of Byzantium his capital, renaming it Constantinople. When the Roman Empire split into halves in 395, Constantinople remained the capital of the eastern Roman Empire and gradually transformed into the Byzantine Empire, where Greek language, literature, and culture exerted a strong influence into the Middle Ages.

See also: Alexander III, the Great; Aristotle; Crete; Culture and Traditions; Language and Writing; Minoan Civilization; Myths, Epics, and Sagas; Peloponnesian War; Persian Wars; Religion; Slavery; Society; Trojan War.

FURTHER READING

Adkins, Lesley, and Roy A. Adkins. *Handbook to Life in Ancient Greece*. New York: Facts On File, 1997.

Konstam, Angus. *Historical Atlas of Ancient Greece*. New York: Checkmark Books, 2003.

Pomeroy, Sarah B., Stanley M. Burstein, Walter Donlan, and Jennifer Tolbert Roberts. *Ancient Greece: A Political, Social, and Cultural History*. New York: Oxford University Press, 1999.

Powell, Anton. *Ancient Greece*. New York: Facts On File, 1989.

Homer *See* Trojan War.

Huns

Nomadic tribe whose entry into Europe in the fourth century c.e. disrupted the borders of the Roman Empire. The Huns, who fought on horseback, developed a reputation for being fearsome and destructive raiders who would strike and retreat quickly. Under their great general Attila (ca. c.e. 406–453), the Huns won tribute from the Roman emperors and ruled over a large part of central and eastern Europe.

Some historians identify the Huns with the Hsiung-nu, the invaders who prompted the emperors of the Han dynasty to begin building the Great Wall in the third century b.c.e. In the first three centuries c.e., the Huns migrated from Turkestan, moving westward across what is now Russia to the Hungarian plain. In c.e. 372, they invaded the Volga River valley, displacing the tribes of Goths who lived there and spurring widespread migrations among the Germanic groups.

With their small, sturdy horses, the Huns moved rapidly. Their short reflex bow could fire several arrows in quick succession, thus decimating their opponents' ranks. They also fought with lances and lassos. Roman historians reported that the Huns ate, negotiated treaties, and sometimes even slept on their horses. According to Roman authors, the Huns purposely scarred their faces to look more intimidating.

Attila became king of the Huns in c.e. 434, ruling jointly with his brother Bleda until the latter's death in 445. Following his accession to the throne, Attila signed a treaty in c.e. 443 with the Emperor Theodosius II (r. c.e. 408–450) to remain out of Roman territory. However, by 440 the Huns were back at the Roman border, and over the next three years Attila overran most of the Balkans. In 443, Theodosius paid a ransom of 6,000 pounds of gold to deter an attack on Constantinople.

Attila was a legend even in his own time. Ambassadors who visited him reported that while he entertained guests with lavish food and drink, he dressed simply, sat on a wooden chair, and ate from a wooden plate. He had no decoration on his sword or his horse's bridle, even though such was the custom. He was close friends with the Roman general Aetius, who had been a hostage of the Huns, and the two men enjoyed a mutual respect for their prowess as military leaders.

In c.e. 450, the new eastern Roman Emperor Marcian (c.e. 392–457) refused to pay the Huns the annual tribute. The Roman emperor in the West, Valentinian III (ca. c.e. 419–455), likewise refused to pay. In response, Attila gathered a force of more than 500,000 soldiers and marched into Gaul (modern-day France), causing widespread destruction.

Near Châlons, Aetius came forward to oppose his friend and check the Hun's advance. After a fierce battle, Attila withdrew. The next year, an invasion of Italy brought no better results. In c.e. 453, Attila died on his marriage night to a young, new bride. A severe defeat the following year by a combined force of Germanic groups convinced the Huns to retreat. Attila's kingdom, which had covered a large part of central and eastern Europe, disintegrated. Some Huns returned to Russia, while others stayed in eastern Europe, giving their name to modern-day Hungary.

See also: Gauls; Germanic Groups; Rome.

FURTHER READING

Howarth, Patrick. *Attila, King of the Huns: The Man and the Myth*. Reprint, New York: Carroll and Graf, 2001.

Thompson, E.A. *The Huns*. Rev. ed. Reprint, Malden, MA: Blackwell, 1999.

Ice Age

Period of geological history marked by a freezing global climate and glaciations, when large sheets of ice called glaciers covered the land. The most recent Ice Age in Europe began around 1.6 million years ago and has alternated with 10,000- to 15,000-year intervals of warmer weather called interglacial periods.

The term "Ice Age" commonly refers to the last period of glaciation, which began in Europe about 100,000 to 40,000 years ago and ended around 12,000 B.C.E. During this last Ice Age, enormous animals roamed the frozen stretches of Europe, providing food for human ancestors, the Neanderthal and Cro-Magnon peoples.

The last Ice Age peaked in terms of coldest temperature and furthest glacial extent around 20,000 B.C.E. All of northern Europe and Eurasia was covered with an ice sheet, and glaciers crept slowly through the upland areas of central Europe. Animals such as the cave bear, mammoth, woolly rhinoceros, reindeer, and wild horse populated a treeless, tundralike landscape. Cave paintings dating from ca. 18,000 B.C.E. show how humans survived by taking shelter from the cold in caves and hunting these animals for food and clothing. The use of fire, and the ability to make tools for hunting and to fashion clothing, allowed humans to adapt to the cold and thus survive in a climate where winters lasted for nine months.

After the melting of the last glaciers in northern Europe, people formed more settled communities. The animals of the Ice Age slowly became extinct, perhaps due to climatic conditions or to overhunting by growing human populations. People began to supplement their diet by hunting smaller animals, fishing, and learning to farm. The development of agriculture eventually replaced the hunter-gatherer lifestyles of the Ice Age. Geologists believe the earth is currently in an interglacial period and that another Ice Age will return.

See also: Archeological Discoveries; Cave Paintings; Cro-Magnon Peoples; Neanderthal Peoples; Technology and Inventions; Tools and Weapons.

FURTHER READING

Chorlton, Windsor. *Ice Ages*. With the editors of Time-Life Books. Alexandria, VA: Time-Life Books, 1983.

Macdougall, Doug. *Frozen Earth: The Once and Future Story of Ice Ages*. Berkeley: University of California Press, 2004.

ICE AGE PEAKS, CA. 20,000 B.C.E.

Sheets of solid ice once covered modern-day Britain and Scandinavia, while smaller ice caps formed in the Pyrenees and Alps. Due to the water locked in these massive glaciers, the sea level dropped, giving the ancient European coastline a much different appearance than it has today. Most of Europe was a tundralike landscape roamed by reindeer, woolly mammoths, woolly rhinoceroses, and musk oxen.

Indo-Europeans See Culture and Traditions; Language and Writing.

Justinian I (c.e. 483–565)

Emperor of the eastern portion of the late Roman Empire, the ruler who briefly restored the glory of imperial Rome. Justinian's reign was marked by military successes, improvements in the legal system, and great public works such as the building of the Hagia Sophia church in Byzantium (modern-day Istanbul, Turkey). Scholars view Justinian's reign as a turning point from the culture and ideals of Rome to that of Byzantine civilization, which would prevail in the eastern empire for the next thousand years.

Justinian was born in the village of Tauresium and was adopted by his uncle, the emperor Justin (r. c.e. 518–527), as his son. In c.e. 521, Justinian became consul and shortly thereafter married Theodora. Because she was believed to have been of a lower class than he, the marriage shocked the sensibilities of the upper class. In 527, on the death of Justin, Justinian became emperor.

Justinian's actions as emperor showed a desire to restore the former glory of the Roman Empire by reuniting its split western and eastern halves. To this end, he launched military expeditions to reclaim North Africa from the Vandals and to wrest Italy from the kingship of the Ostrogoths, who had been its rulers since the German king Odoacer forced the last western emperor, Romulus Augustulus, to abdicate in c.e. 476. Justinian succeeded in taking Italy in 562, three years before his death. At the same time, ongoing wars with Persia occupied the military, and defenses against Bulgar and Slav attacks on the northern provinces were ultimately unsuccessful.

Justinian was a staunch supporter of the Eastern Orthodox Church and passed legislation against those who did not practice Christianity. He prevented non-Christians from holding office and expelled those teachers from the Academy at Athens, Greece, who did not adhere to Christian practices.

Justinian's chief accomplishment was his codification of the laws, which he updated and made more coherent. In c.e. 533, he issued the codification, known as the *Digest of Justinian*, followed by a legal textbook called the *Institutes*. In 534, he issued the *Codex*, which collected imperial laws dating back to c.e. 120. The works were written in Latin, the official language of the Roman Empire. Together, they documented the legal system of the empire.

The reign of Justinian was a landmark of late **antiquity**. His legal codes provided stability, and their rediscovery in Italy during the twelfth century c.e. inspired sweeping civil reforms. The architecture he

supported survives to this day, inspiring citizens and visitors with its beauty. His reign marked the last flowering of Roman culture before Europe entered the Middle Ages.

See also: Christianity; Greece; Latin; Rome.

FURTHER READING

Baker, G.P. *Justinian: The Last Roman Emperor*. New York: Cooper Square Press, 2002.

Cesaretti, Paolo. *Theodora: Empress of Byzantium*. Trans. Rosanna M. Giammanco Frongia. New York: Vendome Press, 2004.

Kievan Rus

State that predates modern-day Ukraine and Russia and that flourished between the tenth and thirteenth centuries C.E. According to tradition, the state dates to the Varangarian chieftain Oleg's seizure of the city of Kiev sometime between C.E. 862 and 882. Because the Varangarians were also known as Rus, the state Oleg established was called Kievan Rus. By uniting the eastern Slavs, the princes of Kievan Rus created a kingdom of political, commercial, and cultural importance that stretched from the Baltic to the Black Sea.

The Slavic people evolved from the Indo-European tribes who migrated into the Ukraine at the end of the last Ice Age, around 12,000 B.C.E. In the seventh century C.E., the Slavs spread north to the Oka and upper Volga Rivers, west to northern Germany, and south to the Balkans. These regions developed their own customs and languages. The eastern Slavic languages, for instance, turned into modern Ukrainian, Russian, and Belorussian.

The eastern Slavs tended to live in small villages. Central, fortified areas served as strongholds and meeting places for tribal events and religious worship. Rather than a central authority, tribes had individual leaders and were linked through shared religious customs and similar language. Extended families held land and livestock in common. In war, the eastern Slavs were known to be tenacious fighters. They traded honey, wax, furs, and slaves with Muslim Arabs, who provided **textiles**, jewelry, and precious metals in return. In the eighth century, they traded also with the Turkish Khazars, who settled around the lower Volga river and Caspian Sea.

In the eighth and ninth centuries, migrating tribes of Norsemen, later called Varangarians or Rus, built settlements along the Baltic coast and near Novgorod. These cities thrived as centers for craftspeople and merchants, as the Rus opened trade routes to the Islamic and Byzantine worlds, sailing all the way to Constantinople and Baghdad. After Oleg established himself in Kiev, he began to link the vital culture of the eastern Slavs through commerce as well as a system of tribute designed to fund wars against the Khazars and a campaign against Constantinople. Oleg's successors were defeated in their attacks on the city when the Byzantines repelled them using a deadly weapon called Greek fire, a destructive compound that ignited on impact. Later rulers, including Olga (r. C.E. 945–962), consolidated the kingdom through military conquest and a standardized system of tribute.

Christianity came to Kievan Rus during the reign of Vladimir the Great (r. C.E. 980–1015) through contacts with the Greek Orthodox Church. The kingdom peaked in extent and cultural activity during the reign of Yaroslav the Wise (r. C.E. 1036–1054), who secured the borders, supported monasteries and built churches, and codified the laws into the *Ruska Pravda*, or Rus Justice. During the twelfth and thirteenth centuries, wars between Yaroslav's successors, a decline in trade, and invasions by the Cumans, an East Turkic people migrating into south

Russia, led to the political fragmentation of Kievan Rus. The once-great kingdom dissolved under the Mongol invasions between 1237 and 1240.

See also: Culture and Traditions; Norsemen; Persian Wars.

FURTHER READING

Hosking, Geoffrey. *Russia and the Russians: A History*. Cambridge, MA: Harvard University Press, 2001.
Vernadsky, George. *Kievan Russia*. Reprint, New Haven, CT: Yale University Press, 1973.

Language and Writing

Most written European languages share common origins, but evidence of language in ancient Europe long predates the appearance of writing. Indications that ancient peoples used language—a uniquely human ability—were first discovered in the pictorial and symbolic representations of communication seen in the cave paintings of the Ice Age. However, these early forms of writing, based on **glyphs** or **pictographs**—pictorial representations of a word or idea—often bear no resemblance to spoken language. The evolution of an alphabet or **syllabary**, in which a written character represents a spoken sound, results in writing as we know it.

SPOKEN LANGUAGE

The similarity of words and structural rules among various European languages has led scholars to suspect that these spoken languages evolved from a shared dialect. This hypothetical language is often called proto-Indo-European because it was presumably spoken among the Indo-Europeans, a tribe or group of tribes who lived around the Caucasus Mountains, between Anatolia and the west Russian steppe. The Indo-Europeans began to migrate throughout Europe beginning in the second and third millennia B.C.E. As groups settled in different areas and began to evolve distinct societies, their language changed and developed.

Although the proto-Indo-European language was never written down, **linguists** have managed to reconstruct a hypothetical lexicon, or vocabulary, based on similarities between the various Indo-European tongues. Shared words for trees, animals, agriculture and stock-breeding, familial relationships, counting systems, and religious concepts have allowed linguists to infer the culture and traditions of these early people.

Indo-European Languages

Among the Indo-European languages, the Greek family became one of the most diverse in Europe, although it borrowed some non-Indo-European elements from neighbors like the Minoans (ca. 2600–1450 B.C.E.). Two other major languages contemporary with early Greek, the Thracian and Illyrian tongues spoken in the Balkans, are now extinct. North of the Balkans, the Slavic and Baltic language groups developed. The early form of Slavic remained intact for a long period and did not begin to diverge into its modern branches until about C.E. 400.

The remaining three Indo-European language groups were spoken by the Celts, Germanic groups, and peoples of Italy. In prehistoric times, Celtic speakers predominated in western, central, and eastern Europe. The extent of the language sharply declined with the Germanic migrations and expansion of the Roman Empire between the second century B.C.E. and first century C.E. Before the Latin alphabet was introduced, the early Germanic groups used a written alphabet of signs, or characters, called runes. Latin first emerged among the Italic peoples and became the parent of

MAJOR LINGUISTIC GROUPS OF ANCIENT EUROPE, ca. 2000 B.C.E.

By 2000 B.C.E. the language spoken by the Indo-European groups that had settled throughout Europe began to diversify, and by around 1000 B.C.E , distinct languages had appeared. Although people in some parts of Europe spoke Altaic, Semitic, or Uralic languages, or other non-Indo-European languages such as Etruscan or Basque, most European languages belonged to the Indo-European family.

the modern Romance languages, including French, Italian, Spanish, Portuguese, and Romanian.

Non-Indo-European Languages

Not all peoples in ancient Europe spoke an Indo-European language. Groups in the Middle East and North Africa who spoke Semitic languages, a major subfamily of Afro-Asiatic languages, also settled in Europe at various times. Estonian, Finnish, and Hungarian belong to the Uralic family of languages, which originated around the Ural Mountains of central Russia. Speakers of Altaic languages in Bulgaria, Romania, and other Balkan states also reflect early migrations from the east.

In addition, certain isolated languages with no obvious relationship to others originated or were spoken in various parts of ancient Europe. The Etruscan civilization, which flourished in central Italy between 800 and 200 B.C.E., used a non-Indo-European language, although writers adopted characters from the Greek alphabet for **inscriptions** on monuments or to label burial items.

EVOLUTION OF EUROPEAN LANGUAGE AND WRITING

ca. 20,000 B.C.E. Cave paintings record symbols and signs

ca. 2000 B.C.E. Indo-European tribes settled throughout Europe; languages begin to diverge from proto-Indo-European

ca. 1450 B.C.E. Linear A script used by Minoan culture on Crete

ca. 1300 B.C.E. Linear B script develops in Mycenaean Greece

ca. 1100 B.C.E. Phoenician alphabet develops

ca. 1100–750 B.C.E. Greeks adopt Phoenician characters for Greek alphabet

ca. 800–750 B.C.E. Homer writes *Iliad* and *Odyssey*

ca. 700 B.C.E. Earliest inscriptions in Etruscan language, using Greek characters

ca. 400 B.C.E. Ionic script adopted as standard Greek

ca. 200 B.C.E.–C.E. 100 Decline of Celtic language due to Germanic migrations and Roman expansion

ca. C.E. 400 Early Slavic languages begin to branch into modern language families

Iberian was spoken in parts of Spain before its conquest by Rome in the third century B.C.E. Like the Etruscan language, Iberian survives only in scattered inscriptions. Some speculate that Iberian was the language of the earliest inhabitants of Europe, the cave painters of Lascaux and similar places.

Basque, a language still spoken in areas of northern Spain and southwestern France, has been variously linked to Iberian or North African languages but seems to be independent of any known linguistic family. Scholars wonder if it may be the last surviving language of the earliest humans in Europe, those who preceded the Indo-Europeans.

EMERGENCE OF WRITTEN LANGUAGE

The introduction of writing marks the transition from "prehistory" to "history." The first civilization in Europe with a recorded system of writing was the Minoan culture of Crete. Minoan writing moved through several phases. The two distinct scripts discovered on Crete and in other areas under Minoan influence have been classified as Linear A and Linear B. The scripts demonstrate the difference between graphic systems based on **logograms**, written characters representing an action, object, or concept, and those based on phonograms, written characters that represent a spoken sound. Systems of **hieroglyphics**, such as Linear A, use logograms, while syllabaries, or alphabets, like that of Linear B, use phonograms. In the earliest forms of writing, people often used logograms to communicate, and these picture scripts varied widely across cultures. In contrast, syllabaries are more limited and are often exchanged between cultures. In this way, the alphabets of all the major languages in Europe derive from the 22-character alphabet developed by the Phoenicians around 1100 B.C.E.

Picture Scripts

Linear A, the earliest written language used in Europe, has never been satisfactorily deciphered. The first traces appear in seals and inscriptions on clay tablets dating between 2100 and 1700 B.C.E. In this script, an assortment of **pictograms** and hieroglyphs represents objects and concepts. Scholars believe that some of the hieroglyphs might have been borrowed from Egypt. In time the pictorial script evolved into a syllabary, which was used on later tablets and seals, between 1700 and 1450 B.C.E. Evidence suggests that the script was used less as a system of writing and more as a system of counting. Just as the earliest scripts in Egypt and Sumer were used by palace administrators and scribes, scholars suspect that Linear A

Before they adopted the Latin alphabet, the Germanic peoples of northern and central Europe used characters called runes to keep records, carve inscriptions, and write poetry. Runic symbols were also used for magical purposes such as divination. (Kai Honkanen/PhotoAlto/Getty Images)

evolved as a way to record the collection and distribution of supplies, a key function of the Minoan government.

The Evolution of the Alphabet

The Linear A script eventually evolved into Linear B, which is sometimes called early or proto-Greek and which developed around 1450 B.C.E. Like Linear A, Linear B functioned largely as a script for keeping records. Palace administrators used the script to record economic transactions on clay tablets and to label containers of foodstuffs such as jars of olive oil. These archival tablets and labels have been found at Pylos, Tiryns, and Myceanae in the Peloponnese, at Thebes in central Greece, and at Chania and Knossus in Crete. Written symbols were supplemented with ideograms or logograms where necessary. A purely utilitarian script, Linear B was non-Indo-European and proved inadequate for representing many of the sounds in the Greek language. After Mycenaean civilization fell to the Dorian invaders around 1100 B.C.E., Linear B fell out of use.

TURNING POINT

The Iliad and the Odyssey

Tradition has it that these two epic poems were written by a rhapsode (an oral performer who recites or sings verse) named Homer, an Ionian Greek, sometime between 800 B.C.E. and 750 B.C.E. The stories describe events during and after the Trojan War, said to have occurred around 1250 B.C.E. The tales were passed down through oral storytelling until Homer wrote them down. Historians debate whether a single man named Homer ever existed or if a series of singers composed the epics over time. The epic poems are examples of oral formulaic verse, wherein a composer draws on a stock of repeated lines and phrases as he works with a traditional story. This makes it likely that the earliest recorded versions of the *Iliad* and the *Odyssey* had already been retold many times.

The *Iliad*'s account of the Trojan War and the *Odyssey*'s story of the Greek hero Odysseus's 10-year voyage home from the war were enormously popular and became two of the most influential texts in Greek literature. Aside from their artistic beauty, they abound in the myths that formed the basis of the Greek religion and provided the Greeks of Homer's day and later with an antique, heroic heritage. The poems also incorporate details about Greek life and customs in eighth century B.C.E. The *Iliad* and the *Odyssey* inspired imitations of all types and today are considered pinnacles of achievement in world literature.

Instead, the Greeks adopted the alphabet of the Phoenicians, modifying it for their own needs. The process of adapting the alphabet spanned the next 500 years; different scripts were used at different times, and versions of a Greek alphabet were as different as the areas that developed them. The earliest inscriptions on monuments reflect no fixed rules for the direction or rotation of letters; the writing flows up, down, from left to right or vice-versa, and sometimes tilted sideways. The language of Homer and Hesiod, Greek poets thought to have lived in the eighth century B.C.E., is written in only one of several variant alphabets. By 403 B.C.E., this language, called the Ionic script because it developed in Ionia on the coast of Asia Minor, became generally adopted by the Greek city-states.

The Romans received the Greek alphabet in the sixth century B.C.E. through trade and interaction with the Etruscans and the Greek colonies on the Italian peninsula. While the Greek alphabet would give rise to the Cyrillic alphabets of the east, the Romans disseminated their Latin alphabet throughout the west.

Runes

Early Germanic and Norse groups used an alphabet based on a system of signs or characters called runes. Like other alphabets, each rune represented a different sound. The Goths first began to use runes in the first century C.E. Some scholars believe that they borrowed runic characters from the Greek or Latin alphabets. The word "rune" also meant "secret" in the Gothic language, and runic writing were used for religious and mystical purposes as well as for inscriptions on coins, monuments, and other **artifacts**.

Occasionally composed in verse, these inscriptions, written on wood or stone, most frequently commemorate voyages, legal agreements, and deaths. Ogam, the runic script of the Celts, was also used for both writing and divination. Like the Phoenician alphabet, the runic alphabet maintained a fixed order, but runic inscriptions read from right to left.

Because runes were also used for divination, Christian authorities frowned upon their use. After these groups adopted the Latin alphabet for recording their written language, runes and ogam gradually fell out of use.

SPREAD OF WRITING THROUGHOUT EUROPE

The preliterate peoples of Europe found the alphabet an efficient means of translating their spoken languages into written script. Groups absorbed by the Roman Empire used Latin to communicate with the government, adapting the Latin alphabet to their native or vernacular tongues. After coming into contact with the Roman Empire during the second century B.C.E., many Germanic groups adopted the Latin alphabet. The earliest document written in Gothic, a translation of the Christian Bible by the scholar Ulfias made around C.E. 376, uses the Latin alphabet to represent the Gothic tongue.

After the collapse of the western Roman Empire in C.E. 476, the extent of learning and the circulation of literature in western Europe declined sharply, leading some historians to refer to the following centuries as the Dark Ages. However, Latin remained the language of the Christian Church and the language of government, administration, and higher education, as well as the language used by the **aristocratic** classes in areas formerly under Roman rule. In addition, Greek literature and the arts continued to flourish in the eastern half of the Roman realm—what became the Byzantine Empire—for many centuries following the fall of the west.

See also: Art and Architecture; Christianity; Culture and Traditions; Etruscan Civilization; Greece; Latin; Minoan Civilization; Myths, Epics, and Sagas; Religion; Rome; Society.

FURTHER READING

Davis, Joel. *Mother Tongue: How Humans Create Language*. New York: Carol, 1994.

Elliott, Ralph W.V. *Runes: An Introduction*. 2nd ed. Manchester, UK: Manchester University Press; New York: St. Martin's Press, 1989.
Jackson, Donald. *The Story of Writing*. New York: Taplinger, 1981.
Logan, Robert K. *The Alphabet Effect: The Impact of the Phonetic Alphabet on the Development of Western Civilization*. New York: Morrow, 1986.
Mengham, Rod. *On Language: Descent from the Tower of Babel*. Boston: Little and Brown, 1993.

Latin

The culture and language of early Latium, the region of Italy in which Roman culture originated. The term later evolved to refer also the language and culture of Rome itself, which eventually spread to all areas that fell under the influence of the Roman **Republic** and later the empire. Latin persisted as the language of the educated class throughout the Middle Ages in Western Europe and as the language of the Christian Church to the present day.

The Latin language belongs to the Italic branch of the Indo-European family of languages. Related languages—such as those used by the Celts, Germanic groups, and Greeks—may have played a part in the evolution of early Latin, which appeared around the eighth century B.C.E. Absorbing linguistic influences from the Etruscan civilization to the north, which provided a series of early Roman kings, Latin emerged as the language of Rome. As the city expanded in power and influence, eventually conquering the Etruscan city-states, the language, law, customs, and culture of Rome spread to its colonies throughout the Italian peninsula and beyond. This helped to establish a shared means of communication and provided a common currency for the exchange of ideas.

In about 100 B.C.E., archaic or Early Latin evolved into classical Latin, the tongue of the government, literature, and philosophies of the Roman Empire (27 B.C.E.–C.E. 476). In the last days of the republic and the early days of the empire, Greek was considered the language of the educated classes in Rome. As the empire expanded, however, it introduced the Latin language into its various provinces. Although Roman officials did not suppress the use of native languages, classical Latin became the written form for all administrative correspondence and scholarly works. When spoken, Latin could take different forms; colloquial Latin, spoken by the upper classes, differed from vulgar Latin, which was used by the lower and uneducated classes.

After the Roman Emperor Theodosius I (C.E. 339–397) adopted Christianity as the official religion of Rome in C.E. 380, writings and sermons associated with the Catholic Church were conducted in Latin. As the Roman Empire dissolved, Latin persisted among the groups previously subjected to Roman rule—people who had learned it as the language of the state. The Dark Age kingdoms that emerged from the ruins of the Roman Empire continued to use Latin for government documents, literature, and as the spoken tongue of the educated ruling classes.

Latin survived as the everyday language of the Roman Catholic Church until well into the thirteenth and fourteenth centuries C.E., and it is still the Vatican's official language. Classical Latin ultimately evolved into the modern Romance languages, including Italian and French.

See also: Christianity; Language and Writing; Rome.

FURTHER READING

Janson, Tore. *A Natural History of Latin*. Trans. Merethe Damsgård Sørensen and Nigel Vincent. New York: Oxford University Press, 2004.
Palmer, Leonard Robert. *The Latin Language*. Reprint, Norman: University of Oklahoma Press, 1988.

Megalith Culture

See Art and Architecture.

Minoan Civilization

Based on the island of Crete in the Mediterranean Sea, an ancient culture that flourished between 2600 and 1450 B.C.E. Named after King Minos of Greek myth, Minoan civilization was the first European society to enter the **Bronze Age**. Minoans established a prosperous society based on farming and trade, controlled sea routes throughout the Mediterranean with a powerful navy, and developed highly sophisticated art and architecture millennia before the better known civilizations of **classical** Greece and Rome.

Crete functioned as a trading center even in the late **Neolithic** Period, and by 2600 B.C.E. its residents had mastered techniques of making bronze tools and weapons. Crafts, such as ceramic pottery, stone bowls, sealstones, and clay figurines, were marketed along with exports of wine and olives. A large navy rid the sea of pirates, and Minoan ships traded from the Nile in Egypt to the Bosporus, a strait that connects the Black Sea to the Mediterranean. A temple wall at Thebes, a city of ancient Egypt, depicts a scene where visitors from Crete offer the pharaoh gifts, proving the extent of Minoan commerce and prosperity.

LIFE AND SOCIETY

Agriculture on Crete depended on the cultivation of wheat, olives, and grapes for wine. Olive oil was used for cooking, cleaning the body, and providing light. Figs, honey, and various fruits and vegetables rounded out the Minoan diet. Livestock, such as cattle, sheep, pigs, and goats, provided meat, and fish and shellfish were abundant. Although people who worked on the land often led short and difficult lives, most people tended to live in the growing towns.

The palace of the king formed the focal point of city life. The palace functioned as an economic center where foodstuffs such as wine, corn, and oil were gathered, stored in enormous clay pots, and redistributed among the population. A large administrative class of scribes kept economic accounts, supervised agricultural production and manufacturing, and collected taxes. Writing evolved mainly as a way to keep tallies of stores recorded on soft clay tablets. The Minoans also developed a system of standardized weights and currency.

Artisans kept workshops near the palace where they produced high-quality jewelry, metalwork, ceramics, and faience, pottery decorated with a colored glaze. Minoan art, as reflected in the paintings,

The excavation and discovery of the Minoan palace at Knossos, on the Greek island of Crete, with its frescos such as this one depicting dolphins and painted on the Queen's chamber walls, proved that the fabled Minoan civilization had a historical basis. (Guy Vanderelst/Photographer's Choice/Getty Images)

statues, and even everyday items uncovered by archeologists, displays a delight in beauty and splendor. Surviving frescoes, paintings made on wet plaster walls and ceilings, show naturalistic representations of plants, animals, fish, and humans.

Minoan cities were broad and spacious, with paved roads. The middle class lived in small mansions, and even the poorer dwellings had six or eight rooms. Minoan palaces were enormous; the one in Kato Zakros had 250 rooms, tiled floors, and a swimming pool. These multistoried structures had systems of baths, water ducts, and drainage that served as indoor plumbing. The palaces contained rooms for guests, ceremonial halls and temples, living quarters for palace staff, workshops, and storehouses. The palace also housed the priest-king, the chief authority of the city. For most of the Minoan period, each city had its own ruler; later the ruler at Knossos gained power over the others. Although common people were buried in caves, important figures, such as kings, were interred in *tholos*-style tombs, huge beehive-like structures made of overlapping rings of stone.

The Minoans delighted in sports, especially boxing and bull-leaping, a sport that apparently involved young athletes performing acrobatics with or around a live bull. Minoan architects built stone theaters inside the palaces to stage music, dancing, running matches, and other entertainments. Frescoes suggest that women participated as freely as men in all aspects of Minoan life; there were even female bullfighters and boxers. Males in the frescoes typically wear a loincloth belted as a kilt or a pair of shorts around the waist, which may reflect everyday attire, while women are portrayed in long skirts knotted around the waist. Men and women of all ranks adored jewelry.

The focus of Minoan worship was the Earth Goddess, whom the Greeks later referred to as Rhea, mother of Zeus. The mother goddess was the source and controller of all things. Other aspects of Minoan religion involved worship of birds and animals (particularly the snake and the dove), sacred trees, and sacred objects like the bull's horns and double-headed axe. Sanctuaries on mountaintops, in caves, or in temples were tended by priestesses. Religious observance typically included offerings, most likely in the form of oil, figs, honey, and sometimes animals.

DISAPPEARANCE

The Minoans influenced their neighbors through trade, not warfare. Their palaces and cities had no fortified walls, perhaps indicating an absence of

ANCIENT WEAPONS

Metallurgy

Ancient civilizations such as the Egyptians in Africa and the Sumerians in western Asia knew metallurgy, or procedures for mining precious metals such as gold, silver, and copper and making artifacts with them. Late in the Neolithic Period, inhabitants of Europe accustomed to using stone tools and weapons began to experiment with using weapons made of metal, especially copper. The use of metals for tools and implements marks the emergence of a civilization from the Stone Age, which happened in southeast Europe ca. 3000 B.C.E.

Precious metals in their pure form rarely occur in nature; rather, they appear as a compound or ore that can be extracted from the rock or ground. Around 5000 B.C.E., the Sumerians learned the technique of copper smelting, a process of refining the pure metal from other compounds, such as malachite or azurite. In the fourth millennium B.C.E., these techniques spread to Europe, where the earliest copper artifacts date to ca. 3200 B.C.E. The frozen "Iceman" found in the Alps, who died ca. 3300 B.C.E., carried a flint knife, a number of flint-tipped arrows, and an axe made of copper.

As the first metalworkers found, gold and silver proved too soft to hold an edge and thus were only adequate for precious objects or ornamental weapons. Copper, when hammered or ground in the manner used for making stone tools, would become brittle and break. Heating and then slowly cooling the metal, a process called annealing, helped make the copper stronger. In time smelters discovered that adding other substances to the metal as it heated created an alloy, a stronger blended metal. Copper alloys blended with arsenic appeared throughout western Asia and made their way, through trade, to southern Europe.

Then Egyptian metalworkers discovered that adding a small amount of tin when smelting copper made the metal stronger and easier to cast into shapes such as blades and axe heads. This resulting alloy, called bronze, so completely surpassed stone in its usefulness in ornaments, tools, and weapons that the metal ushered in a new era—the Bronze Age.

Bronze tools and weapons first came into use in southern Europe in the civilizations around the Aegean Sea ca. 3000. The Cyclades, a series of islands off the Aegean peninsula, and the growing settlements on Crete prospered first in trading and then in producing bronze implements. The most abundant copper mines appeared on Cyprus, a large island in the eastern half of the Mediterranean Sea. During the third millennium B.C.E., traders discovered tin mines in modern-day Great Britain. The healthy commerce that emerged from the making and trading of bronze ornaments and weaponry added to the wealth of the Minoan civilization based on Crete that reached the peak of its prosperity and influence between 2600 and 1450 B.C.E. The Bronze Age spread north through the rest of Europe, reaching central Europe around 2500 B.C.E. By 2000 B.C.E., populations in Scandinavia and the British Isles had the use of bronze tools.

concern for internal or external strife. Earthquakes posed a constant threat, however, and a violent eruption on the volcanic island of Thera (now Santorini), around 1500 B.C.E., caused widespread devastation on Crete and may also have ruined the Minoan navy.

After 1500 B.C.E., the Minoan kings lost power to the Mycenaeans of mainland Greece, a more warlike culture that borrowed art and weaponry extensively from the Minoans. Minoan culture continued, although under Mycenaean leadership, until about 1100 B.C.E., when new invaders from mainland Greece, the Dorians, leveled the great palace of Knossos and brought the already weakened Minoan civilization to an abrupt end.

After the fall of Mycenae, stories about Minoan culture persisted in orally transmitted legends such as that of Theseus and the Minotaur, a monstrous half-bull, half-man figure who lived on Crete in a labyrinth fashioned by the legendary Greek inventor Daedalus.

In C.E. 1900, Sir Arthur Evans, a British archeologist, uncovered the palace at Knossos. Bits and pieces of frescoes emerged with pictures of griffins, dolphins, and flowers in vivid settings of deep blue and gold. Numerous decorated vases, detailed jewelry, and clay jars, still holding wine and oil, attested to the level of prosperity, artistic accomplishment, and bureaucratic control that signified Minoan life on Crete.

See also: Archeological Discoveries; Art and Architecture; Crete; Culture and Traditions; Greece; Language and Writing; Myths, Epics, and Sagas.

FURTHER READING

Fitton, J. Lesley. *Minoans*. London: British Museum Press, 2002.

Higgins, Reynold. *Minoan and Mycenaean Art*. Rev. ed. London: Thames and Hudson, 1997.

Nardo, Don. *The Minoans*. San Diego, CA: Lucent Books, 2005.

Mycenaeans

See Greece.

Myths, Epics, and Sagas

Traditional stories that ancient Europeans told about their origins, supernatural beings, legendary heroes, or other **primitive** aspects of the past in order to help explain the mysteries of life. The epics and sagas of ancient Greek, Roman, and Scandinavian cultures are written stories, while the myths of ancient Europe were circulated through oral, or spoken, traditions.

Myths, epics, and sagas preserve the culture and traditions of a society, pass along moral wisdom, and sometimes recall actual events, such as the Trojan War. Thus, these stories form an important part of the literary, cultural, and historical heritage of the ancient peoples of Europe.

While epics and sagas frequently describe the doings of historical or legendary characters, myths function as metaphorical, or symbolic, tales that convey a truth about a personal struggle, a human event, or the state of the natural world. In all cultures, myths generally seek to explain or celebrate the mysteries of human existence. For example, the myth of the Greek god Zeus's abduction of the Phoenician princess Europa might symbolically explain how the fusion of native and eastern influences formed the Minoan civilization (ca. 2600–1450 B.C.E.) as well as describe how the continent of Europe got its name.

The myths of preliterate societies, societies that existed without the use of writing, often serve as a type of religion. In the case of the pre-Roman Celts, for example, the gods and goddesses described in myth were the same deities they worshipped in temples and sanctuaries. Religion, which also involves belief in and reverence of a supernatural power, often employs **doctrines**, or organized beliefs, and follows set **rituals**. Thus, whereas scholars refer to a belief such as Christianity as a religion, they consider stories about the Greek gods to be myths.

MYTHS

No records of the myths of the **Stone Age** peoples of Europe survive. The cave paintings executed by

Cro-Magnon peoples, most of which date between 18,000 and 10,000 B.C.E., might have had religious significance. Archeological discoveries have unearthed a variety of statues in female form, called Venuses, which leads some scholars to believe that these ancient societies worshipped a fertility goddess.

The earliest myths known to modern Europeans originate with the Minoan civilization on Crete. The religion of early Crete remains mysterious, although the double-headed axe, snakes, and bulls all seem to have held deep importance. The Mycenaean Greeks, who replaced the Minoans, also appropriated many of their myths. Their tales say that the chief of the Greek gods, Zeus, was born on Crete and credit Crete as the source of many of the cultural innovations and technological advancements that the Mycenaeans adopted. Also, legends of the wealthy king Minos and how his monstrous half-bull son, the Minotaur, was slain by the Greek hero Theseus seem to pay tribute to Greek superiority.

Myths often encode information about the origins of a people and help to establish a historical basis for the true beginning of an ancient civilization. The many similarities among Celtic, Greek, Roman, and Germanic myths reflect a shared ancestry in the tribes of Indo-Europeans who migrated from the region of the Caucasus Mountains and settled across Europe between 4000 and 2000 B.C.E. For instance, the thunder god of the Indo-Europeans became Zeus to the Greeks, Woden to the Germanic groups, and Odin to the Norsemen. Indo-European gods of agriculture, warfare, crafts, and the underworld also took on different personalities as the earliest tribes settled and evolved.

Greek Myths

The oldest surviving Greco-Roman myths date to the **Bronze Age**, which began around 3000 B.C.E. in Greece, although the stories may have circulated earlier. The deeds of Achilles, the abduction of Helen, and the labors of Hercules all have their roots in Indo-European traditions. The myth that Zeus fought giants called Titans and overthrew his

MYTHS, EPICS, AND SAGAS

ca. 18,000 B.C.E. Cave paintings proliferate in Europe, some featuring animals already extinct

ca. 3000 B.C.E. Beginning of Bronze Age in Europe; trade brings Europeans in contact with Africa and Near East

ca. 1600 B.C.E. Peak of civilization on Crete, ruled by legendary King Minos

ca. 1500 B.C.E. Volcanic eruption destroys island of Thera, giving rise to legends of Atlantis

1180 B.C.E. Traditional date of the fall of Troy

753 B.C.E. Traditional founding of Rome by Romulus and Remus

ca. 750 B.C.E. Homer composes Greek epics *Iliad* and *Odyssey*

ca. 700 B.C.E. Hesiod compiles *Theogony*, a collection of several Greek myths

406 B.C.E. Deaths of dramatists Euripides and Sophocles, whose tragedies incorporated Greek mythology

ca. 200 B.C.E. Apollonios of Rhodes writes *Argonautika*, describing Jason's quest for the Golden Fleece

19 B.C.E. Roman poet Virgil begins the *Aeneid*

C.E. 520 Death of Hygelac, character in the English epic *Beowulf*

C.E. 537 Welsh annals record the death of Arthur, legendary king of Britain

ca. C.E. 1190 Composition of the epic tale of *Nibelungenlied*, describing the ancient Germanic hero Siegfried, prince of the Netherlands, Norway, and Nibelungenlied

C.E. 1241 Death of Snorri Sturluson, Icelandic poet, historian, and mythographer

This eighteenth-century C.E. fresco depicts a scene from Homer's epic poem of ancient Greece, the *Iliad*, written during the eighth century B.C.E. The legendary Trojan War proved a popular subject of art and literature throughout European history. (Giovanni Battista Tiepolo/The Bridgeman Art Library/Getty Images)

father, Cronos, to take control of Mount Olympus might reflect the struggles of these early settlers with pre-existing populations.

Myths also may communicate the evolution of early European social orders. For example, in earliest Greece, Hera was revered as a great goddess and became the center of a widespread religious cult. By the thirteenth century B.C.E., worship of Zeus began to erode Hera's power. In later Greek myth, Zeus marries Hera but is never faithful to her, so in time this once-powerful goddess became little more than the jealous, vengeful wife of a misbehaving husband.

As they settled around the Aegean Sea, the Greeks also incorporated myths from their neighbors in Asia Minor and Mesopotamia. They borrowed Aphrodite, the goddess of love, from the Phoenicians and turned the Cretan sea-god into Poseidon, the brother of Zeus. As Greek colonies expanded, they incorporated native traditions and renamed existing gods, which accounts for the many complexities and contradictions in the mythology.

The Greeks imagined their gods as anthropomorphic—having the appearance and behavior of humans—and attributed human motivations and desires to them. Greek myths furnished material for poetry, visual art, and dramatic plays. Centuries after the legendary Trojan War, which the Greeks regarded as part of their history, heroes like Hector, Achilles, Odysseus, and Ajax still decorated the pottery.

The interpretation of myths changed as Greek society changed. While the quarreling gods had been largely responsible for the outcome of the Trojan War, the later Greek dramatists focused more on human subjects and their personal conflicts. To some, the Greek gods played as important a role in life as they did in myth. The Macedonian king Alexander III, the Great (356–323 B.C.E.) believed himself the son of the Greek god Dionysus and thus, like Achilles and Hercules before him, semi-divine. Alexander's impressive conquests in Greece and Persia certainly helped reinforce this assumption.

Roman Myths

Like the Greeks, the Romans adapted the myths of surrounding cultures. The earliest Roman myths described the founding of cities, such as the story of how the twin brothers Romulus and Remus, nursed by a wild wolf, founded the city of Rome.

The Romans went on to borrow many influences from Etruscan civilization (ca. 800–200 B.C.E.), among them the worship of a wise warrior-goddess associated with healing, childbirth, and the moon, whom the Romans called Diana. The Etruscan king Servius Tullius (r. 578–535 B.C.E.) built elaborate temples to Diana and the sky-god Jupiter. Long after the citizens of Rome had expelled their kings and established a **republic**, they continued to seek the patronage of these two deities.

Later contacts with the Greeks spurred the Romans to adopt all Greek myth and religious practices, simply associating the earlier Greek divinities with existing Roman gods and goddesses. Thus, Jupiter assumed many of the duties and stories of the Greek god Zeus, while his wife Hera became Juno. The Roman god of war, Mars, replaced the Greek Ares and grew in influence and importance, while the smith-god Hephaestus (Vulcan to the Romans) had less to do. Roman art and architecture often featured stories that originated in Greek myth, such as the story of Aeneas, a Trojan prince, guiding a number of exiles to Italy after the famous war.

Just as Roman religion absorbed the gods and goddesses of the territories they conquered, such as the Egyptian mother-goddess Isis or the Persian sun-god Mithras, Romans expanding into Europe often assimilated the myths of the Celts. Usually, they renamed the native Celtic deities with the names of the Roman divinities they most resembled. For example, Celtic war-gods were frequently associated with Mars and goddesses of wisdom and healing with Minerva.

For European groups outside of Roman influence, like the early Germanic groups, the Huns, and the Slavs of Kievan Rus, myths never were written down. Literacy came instead with the Christian missionaries who taught that native beliefs were untrue and possibly evil. As a result, many stories of these pre-Christian societies simply disappeared.

Celtic Myths

While in most areas of Europe the mythology of the Celts was absorbed into Roman stories and practices, the inhabitants of Ireland, which remained free of Roman **colonization**, preserved a lively and complex mythology untouched by Roman influence. Myths from the region began as oral tales and were eventually written down, perhaps in the sixth century. Irish myth cycles describe how Ireland had first been populated by the Dananns, descendants of the goddess Danu. Brigid, the granddaughter of Danu, was regarded as the goddess of healing and fertility, crafts such as metalworking, and also fire and poetry. Other Irish myths reflect the values of a society built and protected by warfare. For example, the hero Cú Chulainn excelled in battle and also in stealing cattle.

The myths of other Celtic groups throughout Europe also described the doings of gods, goddesses, and other supernatural beings that inhabited an enchanted otherworld (or underworld) where things did not change or die. Many stories told of gods and goddesses crossing into the living world to test, trick, or seduce humans, sometimes taking shape as animals such as white deer or sows to do so. Spirits called fairies watched and occasionally interfered with human events, for instance switching a healthy human infant for a sick fairy child when a mother was not vigilant.

Celtic deities often varied by tribe. Unlike the Greeks, who pictured their gods living above the human realm, the Celts located their divinities in specific geographic regions. A goddess of healing springs, known as Sidona among the Gauls, appeared as Sulis to the Celts, living near Bath in Britain. Celtic groups living around the Rhine revered a river goddess named Sequana, known as Coventina to Celts living near Hadrian's Wall in the north of Britain. Serving as patrons of war, agriculture, healing, and various crafts, Celtic gods and goddesses presided over all aspects of life. The beauty of the Celtic otherworlds greatly influenced western European storytelling traditions, notably the later medieval tales of King Arthur.

EPICS

Traditional epics began as oral poems about heroes, warriors, and divine figures, which were eventually written down. European examples include the *Iliad* and the *Odyssey*, attributed to the

Greek poet Homer, writing around 750 B.C.E. The legendary events of the Trojan War contributed the subject for most epic Greek poetry, although other authors such as Apollonios of Rhodes wrote about the voyages of Jason or the labors of the Greek demigod Hercules. The epics idealized a heroic code that inspired Greek art as well as life; it was said that Alexander III, the Great, ruler of ancient Macedon from 336 to 323 B.C.E., slept with a copy of the *Iliad* beneath his pillow.

The Romans continued the tradition of celebrating their gods and heroes and preserving their national history with epic poetry. The poet Virgil (70–19 B.C.E.) described the career of Aeneas in the *Aeneid*; Statius, writing between C.E. 80 and 92, recorded the deeds of Theseus, including his conquest of the Amazon queen Hippolyta. As Christianity brought Latin language and learning to the new kingdoms of early medieval Europe, other cultures blended heroic and mythical elements into poetry in the fashion of the Greek and Roman models. Thus, the Old English poem *Beowulf* and later works about the British hero Arthur valorize their heroes in epic style.

SAGAS

The term *saga* generally refers to the prose stories and myths of the Norsemen. Sagas were told orally until about the twelfth century C.E. , when authors began writing them down. The Norse began to populate Iceland in C.E. 870, and there the early oral myths survived in their purest form. When the Norse countries converted to Christianity around 1100, authors began recording the native myths and legends of Norway, Denmark, and Sweden in skaldic poetry (named for the Norse word skald, or composer, and referring to work by a known poet as opposed to poetry by anonymous composers known collectively as the Edda) as a way to memorialize the deeds of historical kings and heroes, adding touches of the magical to the true seafaring accomplishments of the people known as the Vikings. These tales are known as the "kings' sagas."

LINK TO PLACE

Viking Sagas and the Norse Landing in North America

In Icelandic, the verb *vikingr* means to sail, whether in search of new lands to plunder or to trade. Between C.E. 800 and 1000, the Norse sailed across the North Atlantic, settling in Iceland and then Greenland. Seafaring played a key role in the economy of Norse society, and other European peoples feared the swift attacks of the men they called Vikings, seafaring warriors who sacked churches and burned cities that did not pay them tribute.

Sailing in a longship from Baffin Bay in Greenland, the Norse explorer Leif Eriksson landed along the coast of central Labrador in Canada between C.E. 997 and 1003. Son of Erik the Red, Leif had heard stories from a fellow mariner who had been blown off course while sailing from Greenland to Iceland. Finding the land rich in timber and pasture for animals, Leif decided to begin a settlement and named it Vinland for the grapes he found growing there.

The *Vinland Sagas*, written in Iceland during the thirteenth century C.E., describe several voyages across the North Atlantic that, beginning around C.E. 1000, resulted in contacts with the peoples of America. Because the Norse settlement of North America was not permanent, history for centuries has credited Christopher Columbus with the first European landing in the Americas. Then, in 1960, a Norwegian archeologist found traces of a Viking settlement at L'Anse aux Meadows in Newfoundland. While no other settlements have been discovered, the spread of Norse **artifacts** throughout the Arctic regions of eastern Canada suggests a prolonged presence and influence among the first American settlers whom the Norse encountered there.

The greatest of the sagas were written in Iceland in the thirteenth century C.E. and are known as the "Icelandic sagas"; they describe events up until the time of the Christian conversion. Like epics, sagas blend myth with history and concern the ethical values that govern society. The heroes of the Norse sagas are most often wealthy farmers, cunning pilgrims, or resourceful outlaws. Women frequent the sagas, sharing the heroic virtues of courage, fortitude, and honor.

Many of the sagas detail family conflicts (the "family sagas") or the main character's encounters with the law. Rather than relying on fantastical elements or the intervention of gods, the sagas instead highlight the wit and ingenuity of their protagonists. Full of comedic elements, the sagas provide insight into the political, legal, and moral life of the ordinary citizen, making available to modern audiences telling information about pre-Christian belief and society. In this respect, sagas are unique among the bulk of the literature produced during the Middle Ages in Europe.

See also: Art and Architecture; Culture and Traditions; Language and Writing; Norsemen; Religion; Society; Trojan War.

FURTHER READING

Bulfinch, Thomas. *Bulfinch's Mythology*. Introduction and notes by Richard P. Martin. New York: HarperCollins, 1991.

Buxton, Richard. *The Complete World of Greek Mythology*. London: Thames and Hudson, 2004.

Leeming, David. *From Olympus to Camelot: The World of European Mythology*. New York: Oxford University Press, 2003.

Monaghan, Patricia. *The Encyclopedia of Celtic Mythology and Folklore*. New York: Facts On File, 2004.

The Sagas of the Icelanders: A Selection. Preface by Jane Smiley. Introduction by Robert Kellogg. New York: Viking, 2000

Neanderthal Peoples

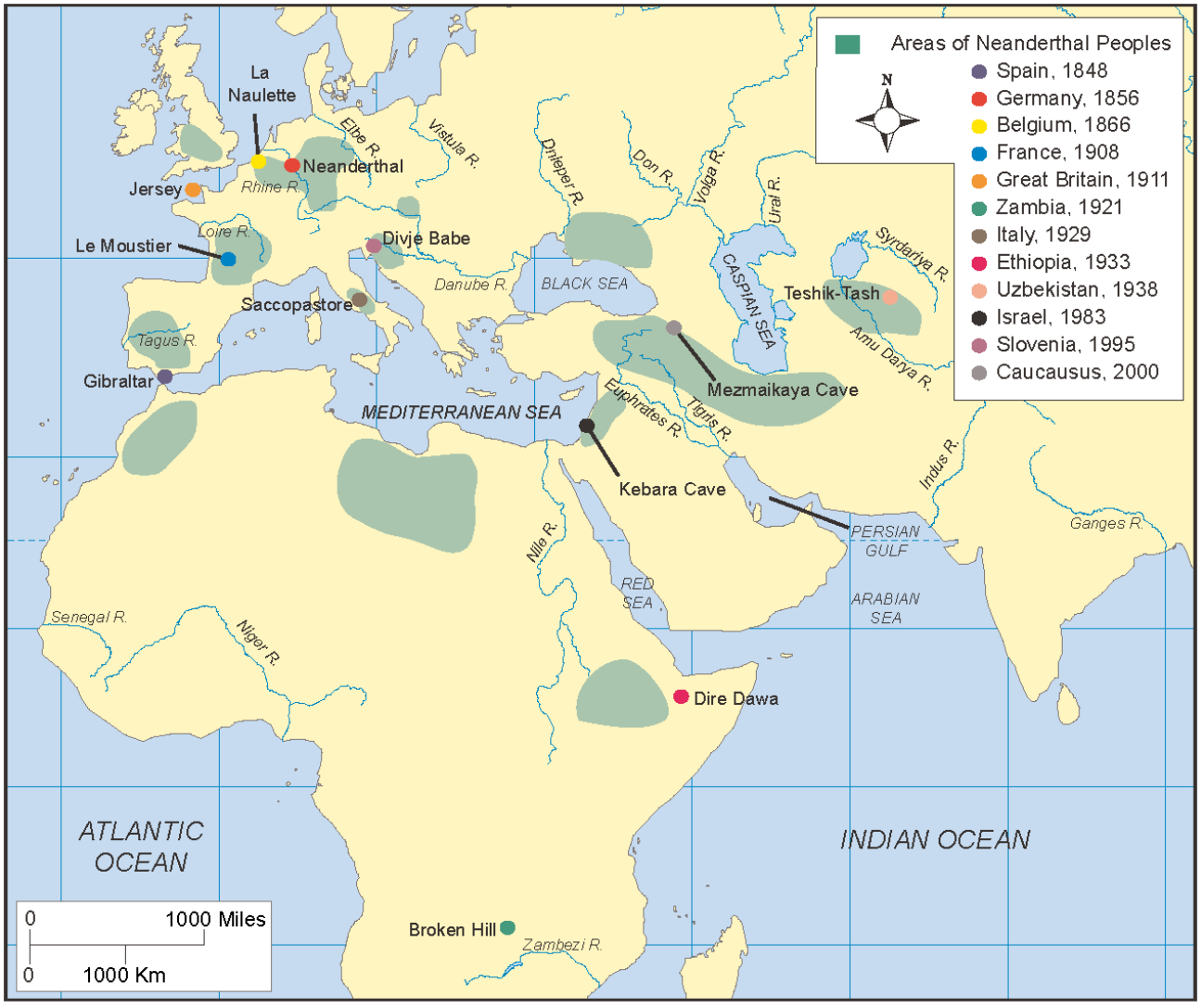
Humans inhabiting Europe from about 130,000 B.C.E. to 30,000 B.C.E., the middle of the last Ice Age. Neanderthals were more evolved than the first human family, *Homo erectus*, but did not share the same features as modern humans, or *Homo sapiens*. A long skull, flat forehead, and prominent brow ridges characterize Neanderthal remains. Like the Cro-Magnon peoples to follow, however, Neanderthals had large brains, suggesting that they had the capabilities for language and complex thought. Where the Neanderthal peoples were once thought to be the so-called "missing link" between modern and more **primitive** types of humans, science now suggests that *Homo sapiens* evolved independently and that the Neanderthal disappeared after 30,000 B.C.E.

Although Neanderthals are known to have occupied the Near East, western Asia, and north Africa, most Neanderthal fossils have been found in Europe. The Neanderthal peoples probably evolved from an earlier species called *Homo heidelbergensis*, which developed from the earliest humans who migrated from Africa to the European continent almost a million years ago.

The Neanderthal peoples are so named because the first fossil remains were found in the Neander Valley in Germany (*Tal* is the German word for valley) in C.E. 1856. The skeletons suggest that Neanderthal peoples were short and had robust bodies, wide shoulders, broad hips, and short, sturdy limbs, suited to the cold climate in which they lived. Neanderthal skulls have receding foreheads, large teeth, and powerful jaws. Males were on average about 5'5" tall (165 cm) and weighed around

NEANDERTHAL SETTLEMENTS

Neanderthal remains have been found throughout modern-day Europe as well as in Israel and Uzbekistan. The heaviest concentration of fossils has surfaced in western France. By 30,000 B.C.E., the Neanderthals had largely disappeared. This map shows the important sites of Neanderthal settlements, and the legend indicates when those settlements were discovered.



200 pounds (91 kilograms), whereas females were slightly smaller.

Neanderthal tools included a stone lance and wooden spears with stone points, which they used to hunt the large Ice Age animals that populated the tundra. Neanderthals used fire to provide warmth and cook food. They also seem to have had some form of spoken communication, though examination of the fossils suggests that the Neanderthal's speech organs were not as sophisticated as that of the modern human.

Neanderthal peoples lived in small tribes and took care of weak or sick individuals in the family. Because they lived during the last Ice Age, they often took refuge from the cold in deep caves, where they constructed tents to house individual

families. For this reason, Neanderthals are popularly depicted as cave dwellers, although it may simply be the case that evidence of open-air Neanderthal settlements has not survived. Neanderthals lived relatively long lives, sometimes more than 50 years. Grave offerings of food, flint tools, and sometimes flowers may have had a religious significance.

Beginning around 50,000 years ago, Neanderthal populations began to disappear, apparently because of competition with *Homo sapiens* for resources and habitats. Archeological evidence suggests that for many thousands of years Neanderthals, and *Homo sapiens* lived side by side, but evolution favored the Cro-Magnon peoples, and, in time, the Neanderthals disappeared entirely.

See also: Archeological Discoveries; Cro-Magnon Peoples; Culture and Traditions; Ice Age; Technology and Inventions; Tools and Weapons.

FURTHER READING

Jordan, Paul. *Neanderthal: Neanderthal Man and the Search for Human Origins*. Gloucestershire, UK: Sutton, 1999.

Kurtén, Bjørn. *Our Earliest Ancestors*. Trans. Erik J. Friis. New York: Columbia University Press, 1993.

Norsemen

Seafaring warriors of Scandinavian descent known for their travels and conquests. The ancient Norsemen, or "Men of the North," lived in Denmark, Norway, Sweden, and Finland, and also settled in Russia, and parts of England, France, Ireland, and Germany between the fifth and tenth centuries C.E.

Norse sailors traveled widely and established trade routes with the new lands they explored. In this way the Norse stimulated commerce throughout Europe and furthered European contact with the Islamic and Byzantine worlds to the south. They also sailed several times across the Atlantic Ocean, founding colonies in Greenland, Iceland, and North America.

SETTLING SCANDINAVIA

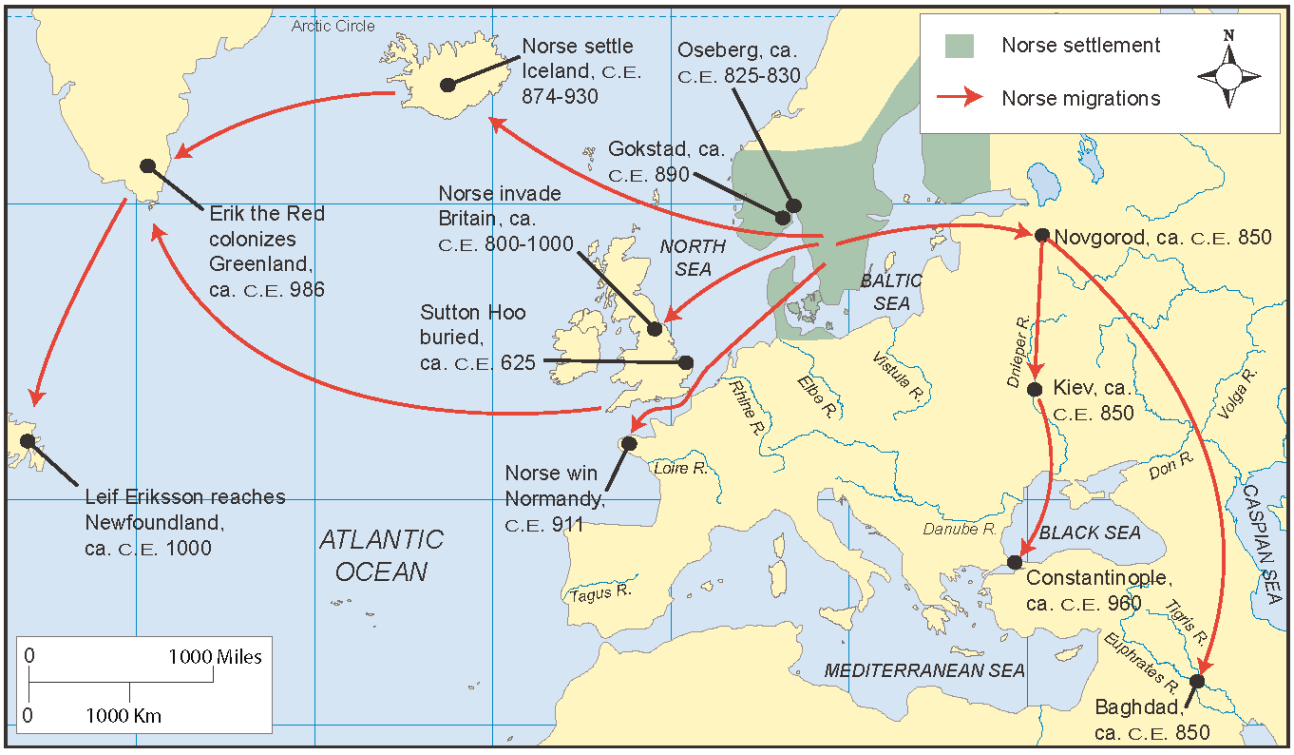
After 12,000 B.C.E., when the glaciers receded and the last Ice Age ended, human habitation became possible in Scandinavia. The people who migrated into the area hunted reindeer and seal using tools of bone and flint. They supplemented their diet by fishing and capturing game birds along the coasts, and they evolved **textile** and pottery-making techniques. Rock carvings with naturalistic representations of animals show the importance of hunting to their way of life. These earliest inhabitants called themselves Sami.

Around 2,000 B.C.E., Germanic groups began to migrate into the area later called Scandinavia. These new settlers subsisted mainly through agriculture and animal husbandry, the practice of raising domesticated animals. Using a tool called the boat-axe, the Scandinavians cleared forests, planted fields, and mined amber. Permanent settlements emerged as families built houses and tended farmland that they would later pass to their children.

During the **Bronze Age**, which lasted in northern and central Europe between 1500 and 500 B.C.E., the Scandinavians traded fur, slaves, and amber to central Europeans for the copper and tin to make bronze tools, weapons, and cooking implements. In time, trade contacts with the Celts and Greeks introduced the use of iron tools and weapons into Scandinavia. Despite their frequent contact with other cultures, the Norsemen retained a sense of common ancestry with the other Germanic groups, such as the Goths and Saxons.

PATHS OF NORSE INFLUENCE, 2000 B.C.E –C.E. 1000

From their homelands in Scandinavia, Norse sailors ventured east, west, and south, raiding or establishing trading routes as far as Constantinople and Baghdad. Modern archeologists excavating at Sutton Hoo, Oseberg, and Gokstad uncovered remains of the longboats that Norse adventurers used to sail the seas far beyond Europe, colonizing England, Iceland, and Greenland and eventually reaching North America.



SOCIETY AND DAILY LIFE

Most Norse people lived in longhouses, which featured one main room that provided fireplaces for warmth or cooking and space for sleeping, storage, and housing the farm animals. Clusters of houses might be enclosed with a defensive wall to form a hill fort. Larger towns developed on seacoasts where natural harbors allowed ships access. Drinking vessels and tableware of gold, glass, and silver attest to frequent trade between the Norse and the Roman Empire.

The practice of burying people in ships, along with food, clothing, weapons, and other possessions, demonstrates the central value of seafaring abilities to this society. Examples of ship burials are the Sutton Hoo site in England or the mounds at Gokstad and Oseberg in Norway. Ship burials were reserved for royal or otherwise important men (usually warriors) and women. Ordinary people were cremated or buried in simple graves.

The highest class in Norse society was composed of wealthy nobles called earls, or *jarls*, who acted as political leaders and provided protection to neighboring families or clans with whom they had bonds of friendship or kinship. A *jarl*'s wealth took the form of estates, ships, treasure, and followers in the form of a household army, or warband. The most influential *jarl*, or earl, in a region often became king, or chieftain, through popular consent. The spacious hall of the chieftain provided a central gathering-place for feasts and ceremonies. The *jarl*'s generosity in giving gifts reinforced the loyalty of his retainers.

The middle class, or *karls*, were freemen, landowners, merchants, or craftspeople. Freemen often

A dragon's head decorating the prow of a Viking longboat draws on the fierce qualities of this mythical creature, common in Norse mythology, to embolden the hearts of its sailors engaged in trade, exploration, or war. (Werner Forman/Art Resource, NY)

worked for landowners or had other occupations, like fishing. Slaves, beggars, and outlaws composed the lowest class. Slaves might be captives from a raid or battle, although a free man could be enslaved if he committed a crime or could not pay a debt.

Because the Scandinavians did not have a written language, oral communication in the form of oaths, vows, boasts, and other speeches held great significance. Laws were memorized and transmitted at assemblies called *things*. All free men and women who were legal citizens attended the *thing*, where they voted on laws and submitted disputes to the king for judgment.

The Old English epic poem *Beowulf* preserves the flavor of life in sixth-century C.E. Scandinavia, especially the atmosphere of frequent war and the emphasis on the heroic warrior code. The sagas of

ANCIENT WEAPONS

Longboats

The extensive coastline, large glacial lakes, and numerous islands of Scandinavia led the inhabitants to develop sea travel for fishing, trade, and **colonization**. Early examples, such as the Hjortspring boat, found in a peat bog named Hjortspring Mose in the southern portion of the Jutland peninsula in Denmark and dating to 350 B.C.E., used the clinker construction common to early Germanic groups. Clinker boats ranged from 60 to 80 feet (19 to 24 m) long, with a bottom made from a hollowed-out tree trunk and sides made of two broad, overlapping planks. The ribs were spaced to accommodate men rowing the twelve to fourteen pairs of oars.

Longboats followed clinker construction with two improvements: a fixed side rudder and, in the eighth century C.E,, a sail. Planks of oak or pine were fastened with iron rivets or sometimes lashed to the ribs with spruce roots, which allowed the hull to remain light, flexible, and strong. Walrus- or sealskin ropes raised the mast and sails made of interwoven strips of woolen cloth painted with a checkered pattern. Chroniclers called the longboats dragon ships not just for their speed and flexibility, but for the ferocity of the well-armed warriors they carried. One longboat, made in C.E. 1060 and discovered near Dublin, Ireland, was 100 feet (30.5 m) long, had 30 pairs of oars, and could carry 100 men.

Norse sailors navigated by the sun and stars, and predicted the weather by observing winds and currents. In C.E. 1893, a replica of a longboat found at Gokstad, outside Oslo, sailed from Norway to Newfoundland in less than a month, duplicating one of the most impressive achievements of the Norsemen.

About C.E. 1000, Viking explorers led by Leif Eriksson reached Newfoundland, 500 years before Christopher Columbus arrived in America. This artist depicts the Norsemen wearing thick clothing, necessary to endure the cold voyage from Greenland to Canada. (Art Resource, NY)

the Old Norse, recorded after C.E. 1100, stress the values of courage, strength, loyalty, and a sense of honor, best displayed during battle. The Norse religion included a **pantheon** of gods and goddesses ruling weather, warfare, and agriculture. According to the sagas, the gods fought frequently and preserved a special afterlife for warriors who died in battle.

THE VIKINGS

Beginning in the fifth century C.E., Norse warriors set sail to find new lands to settle. These voyages provided ways to gain wealth and enhance a warrior's reputation through brave deeds in battle. The difficult ocean voyages prompted improvements in shipbuilding techniques which led to the development of the longboat.

With the support of the longboat, the warrior culture that sought wealth and celebrated valor in battle developed the occupation that made the Norsemen feared and famous throughout the European world. In medieval Scandinavian languages, *viking* means the act of going raiding overseas. Dwellers in English and French towns along coasts and rivers regularly prayed "may God deliver us from the fury of the Northmen," referring to the Vikings who sacked monasteries for the wealth of the Christian church.

However, raiding was not the only pursuit of the Norse. They expanded trade routes, explored new lands from Iceland to North America, and developed sophisticated art in the form of ornamental carvings and skaldic poetry. By the ninth century C.E., the Norse controlled two-thirds of England and the duchy of Normandy in France. By 1000, when Norse settlements had been established in Iceland, Greenland, and Russia, trade became more lucrative than piracy and the famed Viking Age came to an end.

See also: Christianity; Germanic Groups; Kievan Rus; Language and Writing; Myths, Epics, and Sagas.

FURTHER READING

Haywood, John. *The Penguin Historical Atlas of the Vikings*. New York: Penguin Books, 1995.

Sawyer, Peter, ed. *The Oxford Illustrated History of the Vikings*. Paperback ed. New York: Oxford University Press, 2001.

Schaffer, David. *Viking Conquests*. San Diego, CA: Lucent Books, 2002.

Odoacer (oh-doh-AY-sehr) (C.E. 435–493)

Germanic king who forced the last of the Roman emperors to abdicate in C.E. 476, bringing an end to the Roman Empire in the west and ushering in the Middle Ages in Europe.

Odoacer was born of one of the Germanic groups whose migrations in the fifth century C.E. put pressure on the disintegrating boundaries of imperial Rome. His father served Attila (ca. C.E. 406–453), king of the Huns. Odoacer's birthplace and the identity of his mother are unknown. Because his early history is shrouded in mystery, he may be the Adovacrius recorded as leading a band of Saxons against the town of Angers in Gaul (modern-day France) in the mid-460s C.E. In the mid-470s, Odoacer distinguished himself as a general in the Roman army and became a member of the emperor's bodyguard.

By this time, most of the Roman army was composed of mercenaries of Germanic origin. In C.E. 476, when the Roman Emperor Romulus Augustulus (ca. C.E. 461–520) refused to grant their request for lands to settle, a group of mercenaries rebelled against the emperor and declared Odoacer their king. Odoacer marched on Ravenna, at that time the capital of the Roman Empire in the west, and forced the 16-year-old emperor to abdicate. He spared the emperor's life but forced him to leave the city.

The once-glorious Roman Empire had been decimated. The Franks controlled Gaul, the Visigoths and Sueves occupied Spain, and Angles and Saxons migrated into Britain. The one province left to the western Empire was Italy, and Odoacer was now its king.

Odoacer struck a treaty with Zeno, emperor of the Eastern Roman Empire, agreeing to rule in the emperor's name in return for control of Italy. Zeno elevated Odoacer to the rank of patrician, the **aristocratic** ruling class, but suggested that Odoacer act in the name of the previous emperor, Julius Nepos, who had himself been deposed in favor of Romulus Augustulus. Odoacer minted coins in the emperor's name but gave Nepos no real control over the government. In C.E. 480, Nepos,

who had been in control of the Roman province of Dalmatia, died. Odoacer added Dalmatia to his possessions and became the most powerful ruler in the west.

In C.E. 489, Theoderic the Great (ca. C.E. 454–526), king of the Ostrogoths, laid siege to Ravenna. Odoacer surrendered in 493 on the condition that the two kings rule Italy together. Shortly thereafter, Theodoric had Odoacer and his family murdered.

Although the Eastern Roman Empire survived until 1453, Odoacer's triumph over Romulus Augustulus marked the true fall of the Western Roman Empire, paving the way for new kingdoms, such as that established by the Franks. The legacy of Rome continued in the widespread use of the Latin language throughout Europe and in Rome's position as the administrative center of Christianity.

See also: Germanic Groups; Huns; Latin; Rome.

FURTHER READING

Heather, Peter. *The Fall of the Roman Empire: A New History of Rome and the Barbarians*. New York: Oxford University Press, 2005.

Scarre, Christopher. *Chronicle of the Roman Emperors: The Reign-by-Reign Record of the Rulers of Imperial Rome*. London: Thames and Hudson, 1995.

Pax Romana (27 B.C.E.–C.E. 180)

The *Pax Romana*, or Roman Peace, is the name given to the two centuries of relative peace that followed the establishment of the Roman Empire. The *Pax Romana* began in 27 B.C.E. when Octavian (63 B.C.E.–C.E. 14), taking the name Caesar Augustus to honor his great-uncle Julius Caesar (100–44 B.C.E.), became the first Roman emperor. For this reason, the *Pax Romana* is sometimes called the *Pax Augusta*, or Peace of Augustus.

The peace lasted until C.E. 180, when the emperor Marcus Aurelius died. During the *Pax Romana*, the Roman Empire reached its furthest extent and Roman culture spread throughout many parts of Europe.

CHANGES UNDER THE PAX ROMANA

Augustus transformed the Roman state from a **republic** to an empire. He established the emperor's role as sole overseer of a system of governors and a large administrative staff. Augustus streamlined the senate, introduced a new judicial court system to make legal decisions, and organized executive committees to advise and guide Senate decisions. He oversaw the construction of several new marketplaces (*fora*), temples, and theaters and ordered the repair of **aqueducts**, bridges, and roads. In fact, Augustus is recorded as saying that he found Rome a city of brick and left it a city of marble. The art, architecture, and literature he commissioned draws heavily on models from **classical** and **Hellenistic** Greece.

Augustus also advocated a return to traditional morality and passed laws to protect and encourage families and thereby ensure social harmony. He set a precedent for the beneficent emperor who provided inexpensive food and lavish entertainments for the common people. However, the Roman satirist Juvenal, writing between C.E. 100 and 120, dubbed Augustus's policy as giving the people "bread and circuses" to distract them from real problems. With the emphasis on family life, upper-class Roman women had more freedom to participate in public events, becoming patrons of the arts and serving as priestesses in religious activities. Women of the middle and lower classes could pursue occupations as shopkeepers and grocers. Augustus also honored veterans in the Roman army and gave them land and Roman citizenship as a retirement package.

Under the *Pax Romana*, the changes introduced by Augustus spread throughout the Roman Empire. One set of laws prevailed everywhere. The Roman alphabet evolved and Latin became the shared language. Literature, the arts, and intellectual activity flourished. Architectural

LINK IN TIME

Pax Romana and Pax Britannia

The *Pax Britannia* refers to a 100-year period when the British Empire reached its point of greatest expansion. From the end of the Napoleonic Wars in 1814 to the beginning of World War I in 1914, the European island nation of Great Britain, with no more than 50 million inhabitants, acquired an empire that covered a quarter of the world's landmass.

Exploration, emigration, and wars served to further British influence and bring the comforts—as well as the distresses—of Western civilization to all areas of the globe. Organizations such as the East India and Hudson's Bay Companies not only mined the resources of Britain's colonies but also enslaved and exploited many of its subjects. The might of the British military, especially the navy, worked to eliminate piracy, stop the slave trade, and oppose local despots. First and foremost, however, it defended British commercial and interests and projected British military might.

The policy of the empire was to maintain a balance of power among continental powers such as France, Russia, Austria, and Prussia, limiting large-scale military conflict where possible. The British were interested in preserving the peace and ensuring a healthy environment for commerce, which was the driving force behind their power. Nevertheless, the use of British arms frequently became necessary to ensure this peace.

The *Pax Britannia*, also called the *Pax Britannica* (both meaning the British Peace), peaked during the reign of Queen Victoria (C.E. 1837–1901). Pomp and spectacle surrounding the queen helped establish the idea of the *Pax Britannia* as a moral as well as a technological turning point, bringing civilization and Christianity to the more than 372 million people who were British subjects. However, to many British—and Roman—subjects, the benefits of "civilization" were not always so obvious. Both empires were maintained primarily by force, and both dissolved when they could no longer impose their rule on foreign subjects.

As in the *Pax Romana* nearly two millennia earlier, sound communication and military strength gave the ruling power the means to impose its law upon a wide variety of diverse peoples. At the same time, despite often heated opposition to British rule, Britain's culture took root in its overseas possessions and fostered a sense of unity between the many far-flung colonies. By the time of its dissolution, the British Empire had created as impressive a stamp on modern history as the Romans had imposed on the ancient world.

accomplishments, such as public buildings, harbors, roads, and aqueducts, took shape in even the most remote cities of the empire. As many as 100 days per year were designated as "theater" days, on which, depending on the size of the amphitheatre, anywhere from 10,000 to 100,000 spectators trooped into the arena to watch plays, processions, games such as chariot races, gladiatorial combats, or public executions.

The Romans introduced their social customs and religion into the regions they ruled, but in many places Roman language and beliefs existed side-by-side with native customs. Although regarded at times with suspicion and at other times with outright hostility by Roman officials, Christianity spread throughout the provinces. Many emperors of the *Pax Romana* also encouraged education. Girls as well as boys were instructed in grammar, reading, and writing.

The Roman cities became bustling centers of trade as improved communications and sound roads made it possible for goods to travel from one end of the empire to the other. Human travelers could do the same, staying at inns and taverns

GREAT LIVES

Hadrian

The Roman emperor Hadrian reigned from C.E. 117 to 138 and helped further the *Pax Romana,* the famous Peace of Rome that prevailed in the empire between 27 B.C.E. and C.E. 180. Publius Aelius Hadrianus was born in C.E. 76, and after the death of his father in 85, he became the ward and later the heir of Emperor Trajan (r. C.E. 98–117). Hadrian received an early education in the army, serving in various regions throughout the Balkans and lower Germany.

When Trajan became emperor, Hadrian returned to Rome and married Vibia Sabina, the emperor's grandniece, in 100 C.E. He climbed steadily through the military ranks, serving first as staff officer, commander, and then as *praetor*, an elected position that gave him the ability to make and enforce laws. Next he served as governor of the province of Lower Pannonia, which included parts of present-day Hungary and the Balkan States. Later he became governor of Syria, and in C.E. 108, Hadrian was made consul, the highest office next to that of emperor. When Trajan died in 117, the Roman military and senate acknowledged Hadrian as the adopted heir and new emperor.

Faced with rebellions along the borders of his empire, Hadrian traveled widely, getting acquainted with his people and their problems. Between 121 and 132, Hadrian visited almost all of the empire's provinces, trying to link the many populations under his rule with a single Roman identity. Coins minted during his reign portray Hadrian as a restorer of the unique cultures of the provinces; most of the coins depict the beneficent emperor as lifting to his feet a kneeling female figure, who represents the local culture.

Rather than expanding the empire, as his predecessors had done, Hadrian looked to defense. He fortified borders, deployed permanent troops at the frontiers, and visited his legions personally to test their readiness. Hadrian's soldiers reportedly loved him for his personal attention to their living conditions, pay, and organization of duties. Among other defensive projects, Hadrian ordered the building of a 73-mile (118-km) wall to protect the northern border of Britain from the invading Picts. Built of stone bricks and lined with a series of ditches, Hadrian's Wall still stands in present-day Scotland as a testament to Roman might.

Few rebellions marked the years of Hadrian's reign. Rather, commerce developed within the fortified borders and some new frontier towns became prosperous. Hadrian helped improve the famous Roman law, establishing formal standards for courts and their authority or jurisdiction. A patron of the arts who himself painted and composed poetry, Hadrian also commissioned works of architecture, including a country palace called Hadrian's Villa and the Pantheon, a religious temple, which present-day travelers to Rome can still visit. Collectively, Hadrian's accomplishments exemplify the prosperity and grandeur achieved under the *Pax Romana*. After his death in C.E. 138, he was buried in the monumental mausoleum he had built, and, following Roman custom, the Senate voted to deify him, which meant Hadrian joined the ranks of the many Roman gods.

along the way. Grain, timber, and stone flowed into Rome to provide building material and food to support the expanding population. Luxury goods such as blown glass and household accessories ranging from combs to iron needles circulated through the provinces. About 20 percent of the population lived in cities; the rest lived on farms or in small towns.

The population of the empire during this period grew to perhaps 50 million or 60 million people, a quarter to a third of whom were held in slavery. Social classes were somewhat fluid as middle-class

citizens sometimes entered the senatorial or equestrian classes, the two highest landowning classes. The *Pax Romana* did not eliminate poverty among the lower classes or crime within the cities, but it did, on the whole, lead to a more comfortable life for a larger number of citizens.

The **era** of the *Pax Romana* was not without bloodshed. Rather, the peace referred to the lack of civil wars or major invasions from the outside. Troops were occasionally summoned to put down rebellions within the provinces, such as that led by Boudicca, the female warrior-queen who led a tribe of British Celts against the legions in Britain in C.E. 60. Roman legions continued to fight battles to extend the empire's borders in Britain to the north and in the east into Dacia (modern-day Romania and Moldava), Armenia, Mesopotamia, and eastern Asia Minor. In addition, five emperors during the years of the *Pax Romana* were assassinated, some for their excesses, such as Caligula (C.E. 12–41), who famously tried to name his horse a senator, and Domitian (C.E. 51–96), whose heavy taxes displeased many subjects.

END OF THE PAX ROMANA

The reign of Marcus Aurelius (C.E. 121–180) marked the end of military peace, as migrating Germanic groups pressed on the borders of the empire. After Aurelius's death, the empire suffered repeated invasions from displaced tribes, such as the Huns. At the same time, frequent internal strife arose as emperors vied for power. Military preparedness declined, populations in cities shrank, and the growing administrative bureaucracy became cumbersome and ineffective. Although the empire survived 300 years until its dissolution by the German leader Odoacer, the *Pax Romana* effectively ended with the death of Marcus Aurelius.

The two hundred years of relative peace and prosperity brought by the *Pax Romana* ensured the survival of the classical world. Blending Greek heritage with the ideals of Rome, the peace created a political, economic, social, and cultural stability. The *Pax Romana* offered a single rule for a rich and varied mixture of ethnic groups, cultures, and diverse peoples for a long stretch of time, something to which subsequent empires have aspired.

See also: Caesar, Gaius Julius; Culture and Traditions; Greece; Latin; Odoacer; Rome; Society; Slavery.

FURTHER READING

Adkins, Lesley, and Roy A. Adkins. *Handbook to Life in Ancient Rome*. New York: Oxford University Press, 1998.

Matz, David. *Daily Life of the Ancient Romans*. Westport, CT: Greenwood Press, 2002.

Mellor, Ronald J., and Marni McGee. *The Ancient Roman World*. New York: Oxford University Press, 2004.

Peloponnesian War (431–404 B.C.E.)

War between the **classical** Greek city-states of Athens and Sparta that led to the collapse of the Athenian empire and the dissolution of democracy in Athens. The war marked the end of the distinctive and independent way of life for the Greek city-states but also produced lasting works of literature. These include a *History of the Peloponnesian War* by the Greek historian Thucydides, the first enduring work of history and one that profoundly influenced the development of historical writing.

FIRST PELOPONNESIAN WAR

Athens and Sparta fought as allies in the wars against the Persian Empire between 490 and 479 B.C.E. Following the Persian Wars, however, leaders of the two city-states disagreed over which of them should lead the Delian League, an alliance the Greek city-states

had formed for self-protection. Sparta was governed by an **aristocratic** class who feared that the democratic ideals of the Athenians might encourage the Spartan underclass, the Helots, to revolt. In addition, the Athenian leader Pericles (ca. 495–429 B.C.E.) used the treasury of the Delian League to greatly expand the Athenian navy, which made Spartan leaders fear that he planned to rule all of Greece.

Resentment toward Athens grew when it formed alliances with Argos, a Spartan rival, and Megara, a city-state that could act as a buffer between Athens and the Peloponnesus, the southern part of Greece. An alliance of several Peloponnesian city-states formed to resist the growing control of the Delian League, which Athens now controlled. Sparta entered the conflict in 457 B.C.E., defeating the Athenian army at the Battle of Tanagra, but hostilities continued until a truce was declared in 451 B.C.E. These battles are sometimes referred to as the First Peloponnesian War.

SECOND OR "GREAT" PELOPONNESIAN WAR

Even after another truce with Sparta was negotiated in 445 B.C.E., Pericles continued his policies of expanding Athens's set of alliances and increasing the tribute paid to the Delian League. The city-states of Megara and Potidaea, both allies of Athens, rebelled from the League. In response, Pericles employed the Athenian military to impose blockades on the two city-states. Potidaea sought aid from Corinth, a Spartan ally and also a city-state with a navy at its command. In support of Corinth, Spartan leaders demanded that Athens lift the blockades, but Pericles refused.

The Spartan army then invaded Attica, the territory belonging to Athens. The Athenian navy took to the sea, and the citizens of Athens retreated behind the so-called Long Walls, a defensive structure that shielded access to the city from its port five miles (eight km) away, while the Spartan army ravaged the countryside. Since they did not have the equipment to lay siege to the city, the Spartans eventually withdrew. For protection the Athenians stayed behind the Long Walls, a decision that proved costly; plague spread in 430 B.C.E., killing up to a quarter of the city's population, including Pericles.

The Athenian navy continued to fight the Peloponnesian League and used force to intimidate its allies. In 428 B.C.E., when the city of Mitylene tried to free itself from the Athenian empire, Athens starved the residents of Mitylene into submission. These cruel tactics were partially suggested by the Athenian politician Cleon, who succeeded Pericles.

The Spartans fought best on land, while the Athenians had a powerful and skilled navy at their disposal. Military victories went first to one side, then the other. In 425 B.C.E., the Athenian army under the general Demosthenes fought the Spartans at Pylos and killed nearly one-third of their troops. The Spartans surrendered, but in 424 B.C.E. the Spartan general Brasidas captured Amphipolis, an ally of Athens located in northern Greece. Continuing to war over Amphipolis, both Brasidas and Cleon were killed in 422 B.C.E. Sparta and Athens then signed a treaty in 421 B.C.E. called the Peace of Nicias, which lasted until Athens attacked the island of Melos and claimed it as part of their empire in 416 B.C.E.

At the same time, Athenians sent part of their fleet to Sicily in an attempt to secure the island's grain resources. In 415 B.C.E., the Athenians launched another excursion, which was fiercely repelled by the residents of Syracuse, a city in eastern Sicily. The armies of Syracuse were aided by the Spartan commander, Gylippus, who also had in his employ a former Athenian general named Alcibiades, who had joined the Spartans. Of the 40,000 Athenian soldiers sent on campaign to Sicily, only 7,000 survived.

Despite the Sicilian disaster, Athens fought on. In 413 B.C.E., the Spartans made a permanent excursion into Athenian territory, fortifying a site at Decelea, about 13 miles (21 km) from Athens. This allowed the Spartan army to continue to destroy the countryside of Attica, making it necessary for Athens to import food. In the political turmoil that followed, Alcibiades was recalled to Athens to resume military command.

ANCIENT WEAPONS

Hoplites

Around 800 B.C.E., as Greece began to emerge from the Dark Ages into which it had fallen after the Mycenaean civilization celebrated in tales of the Trojan War collapsed, the Greek *polis* or city-state began to form. The bulk of citizens in the *polis* were farmers who owned small plots of land, perhaps no more than ten acres, with a single slave to help farm. These farmers decided the laws that ruled their communities and banded together to fight in times of war. The new type of infantry or foot soldier that evolved from this practice came to be called a hoplite warrior, after the round shield or *hoplon* the soldier carried, three feet (about one meter) in diameter.

Each farmer-warrior bought his own armor, which included a helmet, a breastplate or corselet usually made of bronze, greaves or shin coverings made of leather or bronze, and the round shield. The soldier carried a long bronze-headed spear designed for thrusting and, when the spear splintered, he relied on his short sword. Some might also carry a javelin, a light throwing spear.

Altogether, this equipage weighed up to 75 lbs (34 kg), which made it difficult for the warrior to maneuver. However, the strength of the hoplites rested in their ability to fight in close formation. Between 700 and 500 B.C.E., Greek city-states engaged in disputes over farmland or other rights often agreed to settle the dispute with a pitched battle between two columns of hoplites. The column that broke first lost the struggle. For larger disputes that required more fighters, soldiers formed a *phalanx*, a formation of several columns anywhere from eight to 36 men deep. Shields raised, spears bristling, the phalanx formed such a tight unit that the individual soldiers could scarcely hear or see. They simply pressed forward, stabbing with spear or sword, until the enemy line broke.

The heavy bronze armor of the hoplite could withstand almost any blow. Even when iron became available for weapons, hoplites favored bronze, the harder metal, for their breastplates, which ranged from a quarter to half an inch (1.3 cm) thick. To attack, hoplite soldiers aimed for the face, arms, or legs of their opponents. Most hoplite casualties resulted from trampling by friend and foe alike when a soldier had the misfortune to lose his footing. It was not unknown, in the confusion of battle, for hoplite warriors to mistake their fellow soldiers for the enemy.

In hoplite warfare, cavalry (warriors mounted on horses) and archers played a secondary function. Hoplite armies decided the outcome of the Persian Wars (490–479 B.C.E.) and the Peloponnesian War (431–404 B.C.E.). During the Battle of Salamis in 480 B.C.E., the first recorded naval battle in European history, the Greek ships served as little more than wooden fighting platforms for the hoplite armies. Hoplite soldiers remained a staple of Greek warfare into the fourth century B.C.E., until Philip II of Macedonia (382—336 B.C.E.), father of Alexander III, the Great, developed a new style of warfare that combined hoplite infantry with mounted cavalry and corps of archers, slingers, and javelin throwers.

In the following years, the Peloponnesian wars moved to the eastern Aegean as Athens increasingly went on the defense. The Delian League fell apart as a result of infighting among its members. Sparta, meanwhile, engaged an alliance with King Darius II of Persia (r. 423–404 B.C.E.). In return for money to expand its military, Sparta ceded the Greek communities of Asia Minor to the Persians. With the help of Persian funds, the Spartan general Lysander defeated the Athenian fleet at Notium in 407 B.C.E. The Athenians won a victory the next year, but in 405 B.C.E., Lysander ambushed and destroyed the

Athenian navy at Aegospotami. The Athenians retreated again to their city and, finding their grain supply from the Black Sea cut off, they surrendered the following year.

Sparta took control of the Athenian military and tore down the Long Walls. Although it continued in various battles with Sparta for control of the Greek city-states, Athens would never return to its status as the dominant power in Greece. In the next century, the Macedonian king Alexander III, the Great (356–323 B.C.E.) made the once independent city-states of Greece part of his vast empire.

See also: Greece; Persian Wars.

FURTHER READING

Kagan, Donald. *The Peloponnesian War*. New York: Viking, 2003.

Thucydides. *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War*. Edited by Robert B. Strassler. New York: Free Press, 1996.

Tritle, Lawrence. *The Peloponnesian War*. Westport, CT: Greenwood Press, 2004.

Persian Wars (490–479 B.C.E.)

Wars in which the allied city-states of **classical** Greece resisted Persian invasion. The Persian Wars turned out to be a defining moment in classical Greek history, as the victory reinforced the superiority of Athenian culture and ideals and led to the dominance of the Athenian navy on the Aegean Sea.

ORIGINS

In the sixth century B.C.E., the Greek city-states in Asia Minor came under the control of the Lydian king Croesus (r. 560–547 B.C.E.). In 546 B.C.E., the Persian king Cyrus the Great conquered Lydia and took over the Greek territories. Persia appointed leaders called tyrants to rule the cities, taxed the citizens heavily, and conscripted young men to serve in the Persian Army.

The tyrant of Miletus, Aristagoras, began a rebellion in 499 B.C.E. and gained naval support from some of the mainland Greek city-states. In 498 B.C.E., troops from Athens conquered and burned Sardis, the capital of Lydia, and the Greek city-states of Asia Minor joined the rebellion. The Persian king Darius I (r. 522–486 B.C.E.) suppressed the revolt in 495 B.C.E.

To punish the Athenians, the Persians launched an attack against the city in 490 B.C.E. The Athenians sent for help from the neighboring city-state of Sparta, but the Spartans refused to deploy their impressive military power during a religious festival. In addition, Miltiades, the leader of the Athenian armies, had previously served in the Persian army and was familiar with its tactics. He marched to the Plain of Marathon, where his army met the Persians in a battle recorded in detail by the Greek historian Herodotus. The Athenians routed the Persian forces; more 6,000 Persian soldiers died in the battle, compared with only 192 Greeks. Had the Greeks lost, classical Greece would have become part of the Persian Empire. In winning, the Athenians proved that Persia, the preeminent world power at the time, was no longer invincible.

BATTLES OF SALAMIS AND PLATAEA

Conflicts elsewhere in the Persian Empire, including a dispute over the succession of the Persian king Xerxes (r. 485–465 B.C.E.), kept the Persians busy for the next ten years, but in 480 B.C.E. they attacked again. By this time, Athens had built a navy and formed an alliance with other Greek cities, including Sparta.

To cross the Bosporus, a narrow strait separating Europe from Asia Minor (modern-day Turkey), Xerxes ordered his men to build a bridge of boats fastened together. The Persians then marched

PERSIAN WARS, 490–479 B.C.E.

546 B.C.E. Persian king Cyrus conquers Lydia and sets up tyrants over Greek territories

499 B.C.E. Aristagoras of Miletus rebels against Persian policies

498 B.C.E. Athenians sack Sardis, capital of Lydia

495 B.C.E. Persian king Darius I ends Greek revolt

490 B.C.E. Athens repels Persian army in Battle of Marathon

481 B.C.E. Athenian navy grows to 200 ships

480 B.C.E. Persian king Xerxes crosses pass at Thermopylae

480 B.C.E. Persians defeated at sea in Battle of Salamis

479 B.C.E. Athenians defeat Persians in Battle of Plataea, ending the war

478 B.C.E. Delian league forms to resist further invasion

449 B.C.E. Peace of Callias bans Persian warships from Aegean Sea

down the Greek mainland from the north and the Greeks met them at the narrow pass of Thermopylae. The site was guarded by the Spartan King Leonidas (r. 489–480 B.C.E.) and his troops. Despite their smaller numbers, the Spartans held the Persian army at bay for several days. They thwarted the Persian attacks by luring the enemy forward into the cramped space of the pass where the Persians could not bring their entire force to bear, and then falling upon them.

As Herodotus tells it, however, the Greeks were betrayed. An informer told Xerxes about a goat path he could use through the mountains to get behind the Greek lines. The next morning, when Leonidas saw that the vast Persian Army had gotten behind his defenses, he sent most of his forces back to Sparta and remained with only a small guard, determined to fight to the death. The courage and fierceness of the remaining Spartans, who did indeed perish to the last man, delayed the Persian army from descending on Athens, where shipbuilders were hectically adding to the size of the Athenian fleet. As the Persian navy approached Athens, the Athenian commander, Themistocles, removed the city's inhabitants to the island of Salamis. When Xerxes reached the city, it was virtually deserted; furious, he burned it down.

Themistocles then lured the vast Persian fleet into a battle between the island and the mainland, where the Persians were outmaneuvered by the Athenian navy. The Battle of Salamis (480 B.C.E.), the first recorded naval battle, became one of the most famous in history as the outnumbered Athenians defeated the Persians. Xerxes sailed back to Persia, leaving the army under the command of Mardonius, who invaded the Greek mainland again in 479 B.C.E. This time the Persian forces met with the largest Greek army they had yet faced. The Greeks, led by the Spartan king Pausanius, defeated the Persians at battle of Plataea.

After the Persian forces withdrew, the Athenian fleet reigned as the new power of the Aegean Sea. In 478 B.C.E., the Greek city-states formed an alliance referred to as the Delian League. The member states contributed either ships or money to military defense, and Athens became the leading power in the alliance. As the Athenian military continued to grow in influence and power, the Greeks began to compete with Persian ships for access to major trade routes in the Mediterranean. Persia and Athens declared the truce of Callias in 449 B.C.E., proving that Athens, now the undisputed center of the Greek world, was at least the equal of the Persian Empire. In the second half of the fifth century B.C.E., Athenian culture flourished under the protection of the Delian League, adding to the accomplishments of classical Greece in arts, drama, and architecture that would be much admired by the later Western world.

GREAT LIVES

Herodotus

A Greek historian whose great work called *The History* earned him the term Father of History, Herodotus was born ca. 484 B.C.E. in Halicarnassus, a city in Asia Minor (modern-day Turkey), then part of the vast Persian Empire. As his family belonged to the upper class, Herodotus presumably enjoyed a thorough education in the three subjects that formed the foundation of Greek schooling: grammar, gymnastic education, and music. His writings show a comprehensive knowledge of Greek prose and poetry, including the epic poems written by Homer during the eighth century B.C.E. Herodotus traveled widely in Persia and Greece, visited islands throughout the Mediterranean, and stayed for a while in Egypt. In all of these places, he collected careful notes and observations that later made their way into his enormous *History*.

Around 457 B.C.E., Herodotus moved from Halicarnassus to Samos, an island under the protection of Athens, a Greek city-state at the height of its military power. Around 447, he moved to Athens itself, where the flowering of literature, drama, the arts and sciences, and architecture later led historians to call the period the Golden Age of **Classical** Greece. Herodotus shared portions of his history, then in progress, by reciting long passages to listeners. The citizens of Athens found *The History* promising enough to award him a stipend, and the young Thucydides (ca. 460—ca. 404 B.C.E.), who would go on to compose *A History of the Peloponnesian War*, was reportedly so moved by Herodotus' rhetoric that he burst into tears.

Around 444 B.C.E., Herodotus sailed with other Athenians to found a colony at Thurii, in southern Italy. His work indicates that he visited Athens again in 430, but after that, nothing of his life is known. He died in Thurii between 430 and 420 B.C.E., and his tomb became a public monument.

The History covers the events of the Persian Wars (490—479 B.C.E.) between Greece and Persia but contains many additions and digressions, not all of them factual. In attempting to capture the history of the conflict between Greece and Persia, Herodotus drew heavily on oral tradition, as had the epic poets before him. Although Thucydides earned recognition as the model of modern history for his factual rendering of dates and events, Herodotus freely wove folklore and myth into his tale.

In tracing the histories of Greece and Persia, Herodotus also dwelled upon the history, geography, customs, and climates of other powerful empires at the time, including Assyria, Babylonia, Lydia, and Egypt. His work comes alive with vivid descriptions, lively scenes and actions, and compelling characters. While by modern standards his factual accuracy, methods of inquiry, and philosophy of history can be called into question, Herodotus has inspired historians and storytellers throughout the centuries of Western civilization. Many scholars still rely on Herodotus for his eyewitness account of those customs practiced during the fifth century B.C.E. and for his information about the great battles of the Persian Wars.

See also: Greece; Peloponnesian War; Tools and Weapons.

FURTHER READING

De Souza, Phillip. *The Greek and Persian Wars 499–386 B.C.* New York: Routledge, 2003.

Herodotus. *The Persian War*. Trans. William Shepherd. New York: Cambridge University Press, 1982.

Strauss, Barry S. *The Battle of Salamis: The Naval Encounter that Saved Greece—and Western Civilization*. New York: Simon and Schuster, 2004.

Plato *See* Aristotle.

Pompeii

Ancient Roman city devastated by the eruption of Mount Vesuvius in C.E. 79. Buried under thick layers of pumice, mud, and ash, the city of Pompeii was almost perfectly preserved until excavators uncovered it in 1748. Along with those of its neighboring city, Herculaneum, the ruins at Pompeii contributed a great deal to modern knowledge about everyday urban life in the early Roman Empire.

The town of Pompeii had a long and colorful history. The Greeks established a colony there in the eighth century B.C.E., and in the next century the town came under the influence of the Etruscans, who were building a thriving civilization in central Italy. After 420 B.C.E., the town reverted to the control of its native people, the Oscans, who adopted the Greek alphabet and took over existing trade. Around 310 B.C.E., the Oscans asked for help from Rome in defending against the Gauls, who were invading from the north. The Roman dictator Sulla (138–78

The excavated ancient city of Pompeii, buried under ash and pumice when Mount Vesuvius (seen in the distance) erupted in C.E. 79, preserves a record of art, architecture, and daily life in the early days of the Roman Empire. (Tony Waltham/Robert Harding World Imagery/Getty Images)

Archeologists excavating the city of Pompeii, buried in the volcanic eruption of Mount Vesuvius in C.E. 79, found that the rapidly falling ash had perfectly preserved the shapes of the victims it suffocated. (Bruno Morandi/Robert Harding World Imagery/Getty Images)

B.C.E.) made the city part of the Roman **Republic** around 89 B.C.E.

About 20,000 people lived in the city at the time of its destruction. An ancient defensive wall surrounded a city about 36 acres (64 hectares) in area. Narrow streets opened to broad public spaces, including a theater complex, a public square, or marketplace, called a *forum*, and temples to the Greek god Apollo and the Egyptian goddess Isis. Public buildings, business headquarters, baths, and the market clustered around the forum. Private houses contained gardens and openings in the roof to admit air. Colorful paintings decorated walls and ceilings both inside and outside buildings, while detailed mosaics depicting scenes from history, mythology, and daily life covered walls and floors.

All of these **artifacts** were almost perfectly preserved until excavations began in 1748. The disaster had caught people in the midst of their daily affairs. Tables were set for breakfast; shops were open for business. People died inside their houses or in the streets while trying to escape the falling rock, drifting ash, and poisonous fumes emitted by the volcano prior to its eruption.

In the years of the excavations, tourists flocked to the emerging city, struck by the beauty of the buildings and their artifacts as well as the tragedy of the human victims, many of whom had been preserved under layers of ash. The art and architecture of Pompeii inspired a **classical** revival throughout Europe during the late eighteenth century. At the same time, the details of everyday life preserved in Pompeii gave historians valuable insights into how people in an ancient Roman city lived.

See also: Archeological Discoveries; *Pax Romana*; Rome.

FURTHER READING

Amery, Colin, and Brian Curran Jr. *The Lost World of Pompeii*. Los Angeles: J. Paul Getty Museum, 2002.

Panetta, Marisa Ranieri, ed. *Pompeii: The History, Life and Art of the Buried City*. Vercelli, It.: White Star; New York: Rizzoli, 2004.

Punic Wars

See Rome.

Religion

Religions of ancient Europe were diverse, often complex, and largely undocumented. Many questions remain about the precise nature of certain religious **rituals** such as those practiced by the Minoans, the function of **artifacts** found in archeological excavations, such as the graves of Neanderthal peoples, or the meaning of symbols carved into the massive stones of the burial mounds at Loughcrew and other **Neolithic** sites.

The religions of early European civilizations varied widely in their beliefs and expression, ranging from the few key gods of the Germanic groups to the highly populated **pantheon** of Greek and Roman divinities. Some groups, like the Celts, avoided documenting their religion, while others, like the followers of Judaism, kept careful written records, such as the Hebrew Bible, known as the Old Testament, begun hundreds of years before the time of Jesus and believed to have been completed some time in the first century C.E. Examining the earliest records of the religions of the various peoples of early Europe reveals a great deal about how they lived and what they most valued.

PREHISTORIC RELIGIONS

Most of what is known about the religions of prehistoric Europe comes from archeological discoveries. A large number of female figures called Venuses have been found at various sites throughout Europe. Historians surmise that the statues were carved to invoke the protection of a mother goddess thought to govern fertility and reproduction.

In a similar fashion, some historians have interpreted the cave paintings of the **Paleolithic Period** as having a magical or supernatural meaning, perhaps to ensure a successful hunt or request protection from powerful animal spirits. The **megalith** structures found across Europe dating to the Neolithic Period, of which Stonehenge is a famous example, might also have had a religious function.

The many broad similarities in the religious beliefs of the Celts, Germanic groups, Greeks, and Romans have been attributed to their shared descent from the Indo-European peoples who migrated across Europe in the second and third millennia B.C.E. **Linguists** who study the modern Indo-European languages have found similar words to describe gods, goddesses, and the practice of religion. From this, they have theorized a system of belief in which a sky-god reigns supreme, lesser gods and goddesses govern aspects of nature such as the dawn and sun, and the gods are honored with ritual observances such as a sacred meal or cattle sacrifice.

CELTIC RELIGION

The Celts believed in an enchanted and never-changing Otherworld that existed side-by-side with

the natural world. The families of gods, goddesses, and other beings dwelling in this Otherworld could easily access and influence the natural world. At certain times, humans might also enter the supernatural realm.

All Celtic tribes believed that life came from a mother goddess, either the ancestor of a group of people or the mother of the gods themselves. The goddess might appear as a maiden, representing the innocence and beauty of youth; as a nurturing and protective mother; or as the old woman, the crone, witch, or hag, representing death. In keeping with this understanding of the cyclic nature of life, Celtic festivals marked the turn of the seasons to spring, summer, fall, and winter.

Celtic rituals varied according to tribe, and most settlements worshipped a series of divinities associated with the geographical features of the region. Therefore, the Celtic gods—such as the goddesses Danu and Rhiannon, the mother of the Celtic gods and the Welsh goddess of fertility, respectively—might live in the mountains or the sea, near or within running water, or even inside trees. Water features prominently in Celtic myth, often taking on a sacred aspect. Shrines grew up around springs or next to lakes and rivers as visitors came for help and healing from the resident divinity. Druids, a priestly class who acted as intercessors between the gods and humanity, rarely used temples but rather conducted rituals in the open air, near sacred features of the landscape such as hilltops, springs, or forests. Oak groves often served as holy places.

Roman historians recorded human sacrifice among the Celts, and recent archeological discoveries of bodies preserved in bogs inhabited by early Celts lend credence to this belief. The means of death suggests a ritual killing, perhaps as punishment for a crime or perhaps to gain favor from the gods in times of crisis.

GERMANIC RELIGION

Like other Indo-European peoples, the Germanic groups believed in a family of gods who ruled, fought, connived, and meddled in events just as human families might. Tribal kings in early Germanic society often served as priests of the god Tiwaz, who protected the social order, upheld laws, and oversaw fertility and peace. The prominence of such a god reveals the importance of agriculture to the society. Later, as tribes became more militaristic, gods like Odin or Thor, the thunder god, grew in importance, while the god Frey and his sister Freya became patrons of agriculture and the arts. These deities are the Anglo-Saxon origin of our names of the days of the week: Tiwaz, Tuesday; Woden, Wednesday; Thor, Thursday; and Frey, Friday.

Germanic tribes frequently attributed their ancestry to a god. The Roman historian Tacitus observed that many Germanic tribes claimed descent from sons of the god Tuisto. Later Germanic groups, such as the Angles and Saxons who migrated to Britain in the fourth and fifth centuries C.E., traced

RELIGIOUS EXPRESSION IN ANCIENT EUROPE

ca. 25,000 B.C.E. "Venus" statues carved by prehistoric Europeans

ca. 2500 B.C.E. Indo-European migrations change patterns of religious belief in Europe

ca. 600 B.C.E. Roman king Servius Tullius builds temples to Jupiter and Juno

ca. 4 B.C.E. Birth of Jesus Christ

ca. C.E. 30 Death of Christ at Jerusalem

C.E. 70 Roman army destroys Jewish Second Temple at Jerusalem

ca. C.E. 90 Completion of the Hebrew Bible, or Old Testament, begun in about the ninth century B.C.E.

C.E. 313 Edict of Milan establishes religious tolerance throughout Roman Empire

C.E. 393 Roman emperor Theodosius declares Christianity official religion of Rome

their lineage to Woden. After centuries of contact with Latin language and literature, Germanic religion evolved to include the belief that Thor had actually been a prince of the ancient city of Troy who was exiled after the Trojan War.

The most complete information about the Germanic religion comes from the sagas of the Norsemen. These sagas describe in detail the creation of the world and the ongoing wars between the various families of gods. In Norse mythology, the gods live at the center of the world in a tower called Asgard, humans populate the region known as Middle Earth, and the sea surrounding the outlying boundaries of the world is held together by an enormous serpent.

GREEK RELIGION

Greek religion evolved from a variety of contacts and influences. The Minoan civilization of Crete worshipped a series of goddesses similar to those found in Asia Minor. Mycenaean Greeks in contact with Crete revered a sea-god called Poseidon, a mother goddess named Hera, and a goddess of

People traveled throughout the ancient world to consult the sacred Oracle at the Temple of Apollo in Delphi, Greece. The oracle, a resident priestess, uttered cryptic prophesies that supplicants believed foretold future events. (Grant V. Faint/Iconica/Getty Images)

wisdom and the arts called Athena. Later invaders who settled the Greek peninsula combined their native religion with the beliefs of those in their new home, thus developing a worship of twelve chief gods and goddesses. These gods dwelled on Mount Olympus and were ruled by Zeus, the all-powerful. Each god represented or ruled over a different quality or aspect of life and could be consulted for different things. Apollo, for instance, was the god of poetry, while his sister Artemis protected wild animals.

Almost all daily human activity involved paying homage to the gods in some form. Meals began with a libation, pouring out a small amount of wine or other liquid to honor the gods. Sacrifices such as burning a thigh taken from an animal preceded all important events or decisions. Those giving thanks for a welcome event, requesting a favor, or needing protection visited temples or shrines to make offerings of food, locks of hair, or personal possessions. Sacrifices might also be conducted before consulting **oracles** to learn the will of the gods. Different deities looked after every aspect of the home and household, many of them in the form of ancestral spirits belonging to that particular family.

In addition to the major, minor, and household gods, mystery cults evolved surrounding the figures of Orpheus, a musician who traveled to the underworld; Dionysus, the god of wine and revelry; and Demeter, mother of the earth and goddess of agriculture. Participants in the mystery cults could not share the secrets of their initiation, so little is known about the actual practices associated with these cults.

ROMAN RELIGION

The religion of Rome absorbed several influences from neighboring peoples and yet retained an individual character. Early Romans and other Italic peoples worshipped Mars as their chief deity. Mars, Jupiter, and Quirinus formed a triad served by trained priests. The Etruscans worshipped Tinia, a sky-god who shared many qualities with Jupiter. Under Etruscan rule, the Temple of Jupiter was built around 600 B.C.E. to house statues dedicated to Jupiter as well as Juno (in Etruscan, *uni*) and Minerva (Etruscan *menrva*).

As the growing Roman **Republic** came into contact with Greek colonies on the Italian peninsula and later Greece itself, Jupiter, Juno, and Minerva were identified with the Greek deities of Zeus, Hera, and Athena. This led Roman writers to adopt many Greek stories about these gods into their poetry and mythology. Like the Greeks, the Romans had domestic gods such as Vesta, goddess of the hearth, and also worshipped ancestral and household spirits called *lares* and *penates*. Roman mystery cults, modeled after Greek precedents, were dedicated to Bacchus, the god of wine, the Egyptian mother goddess Isis, or the Persian sun-god Mithras.

The Roman religion played an important role in public life. Priests or priestesses who performed sacrifices, led rituals, and upheld the cult of a god or goddess had a privileged place in society. The favor of the gods was regarded as crucial to personal success, and powerful people such as the Roman general Julius Caesar (100–44 B.C.E.) boasted of having a close relationship with the gods. As part of his efforts to reinstate peace and order, the Roman Emperor Augustus (63 B.C.E.–C.E. 14) reinforced the importance of religious observance in Roman life. Augustus deified his great-uncle Caesar, elevating him to the status of a god. Later emperors followed this practice of deifying their predecessors. The worship of Roman gods and deified human leaders became a state religion in the Roman Empire and all citizens were required to show respect in the form of offerings, sacrifices, and ritual observances.

Practicing the state religion of Rome, then, involved the patronage of several divinities. Adherents to monotheistic religions like Judaism and Christianity, both of which acknowledged only one true god, came into frequent conflict with Roman authorities. Jews and Christians suffered persecution under Roman rule until the Emperor Constantine paved the way for religious freedom by issuing the Edict of Milan in C.E. 313.

GREAT LIVES

Theodosius I, the Great (C.E. 346–395)

Theodosius I, coruler over the eastern portion of the Roman Empire from C.E. 379 to 395, earned the address "the Great" for his reputation as a fair lawgiver and for his making Christianity the official religion of the Roman Empire. Flavius Theodosius was born in modern-day Spain ca. 346. By 368, he served under his father, Theodosius the Elder, a general stationed in Britain. The younger Theodosius fought Germanic tribes in the Rhineland and served in 373 and 374 as governor of Upper Moesia, an eastern Roman province extending over modern-day southern Russia and the Balkans. Theodosius proved successful in battle, but, after his father was executed for treason in 376, he retired to his family's estate in Spain to avoid similar accusations.

In 378, the Western Emperor Gratian (C.E. 359–383) called Theodosius out of retirement and made him commander of the Roman legions on the Danube River. In 379, Theodosius became coemperor of the Roman Empire in the east, and for the next few years he fought against the Visigoths. In 382, he negotiated a treaty with the Visigoths which represented a key change from the policies of earlier governors. Theodosius allowed tribes of Visigoths to settle south of the Danube, inside Roman lands, as independent allies or *foederati*. The Visigoths owed allegiance to their own king, rather than to the Emperor, and they fought in the Roman army as allies, not Roman citizens.

In 380, Theodosius proclaimed Christianity the official state religion of the Eastern Empire. This policy had far-reaching effects on the Roman Empire and on Europe in the centuries to follow. In 391, he forbid pagan or non-Christian worship within the borders of the Roman Empire and officially closed all pagan temples, banning pagan rituals and sacrifices.

In 388, Theodosius ended an uprising led by Magnus Maximus, who had been proclaimed emperor by Roman troops in Britain. Maximus marched into Gaul (modern-day France), killing Gratian, and from there invaded Italy. After executing Maximus, Theodosius remained in Italy to reorganize the western half of the Empire. He appointed Gratian's brother Valentinian II emperor, but in 394, he had to move again to put down another puppet emperor and his commander, who had murdered Valentinian II. For a year, Theodosius ruled a united Roman Empire.

Theodosius died at Milan in 395, leaving the eastern portion of the empire to his son Arcadius, then 17, and the western portion to Honorius, who was ten. Following his death, the gradual disintegration of the western Empire began as Germanic groups acquired more influence and eventually deposed the reigning emperor in 476. However, Christianity survived the fall of the Western Empire and became a powerful institution in Europe during the Middle Ages.

See also: Art and Architecture; Celts; Christianity; Culture and Traditions; Druids; Etruscan Civilization; Germanic Groups; Greece; Language and Writing; Myths, Epics, and Sagas; *Pax Romana*; Rome; Society.

FURTHER READING

Auerbach, Loren, and Jacqueline Simpson. *Sagas of the Norsemen: Viking and German Myth*. With the editors of Time-Life Books. Myth and Mankind. Amsterdam: Time-Life Books, 1997.

Bowker, John, ed. *The Cambridge Illustrated History of Religions*. Cambridge: Cambridge University Press, 2002.

Jones, Prudence, and Nigel Pennick. *A History of Pagan Europe*. New York: Routledge, 1995.

Lane Fox, Robin. *Pagans and Christians*. New York: Knopf, 1986.

Sharkey, John. *Celtic Mysteries: The Ancient Religion*. New York: Crossroad, 1981.

TURNING POINT

The Edict of Milan

In the first three centuries after Christ's death (ca. C.E. 30), Roman authorities regarded Christians with hostility and frequently persecuted them. Non-Christians blamed them for everything from wars to earthquakes, saying they incurred the wrath of the Roman gods by not paying proper tribute. In C.E. 311, however, coemperors Constantine, Galerius, and Licinius issued the Edict of Serdica, granting freedom of worship to all Christians.

According to tradition, the impetus for this decision came the year before, while Constantine was at war with then coemperor Maxentius. The night before an important battle at a site called Milvian Bridge, Constantine reported having a dream in which he saw the image of a cross in the sky accompanied by the words, "In this sign you shall conquer." Constantine ordered his soldiers to paint the sign of Christ on their shields, and his armies won the day.

The following year, Constantine and Licinius issued a decree at Milan that granted freedom of worship to all citizens of the Roman Empire. The edict further declared that all property that had been seized from Christian individuals or the church would be restored.

After the Edict of Milan, the Christian Church became a major religious and political force within the empire. As its protector and patron, Constantine invigorated the young church with property and funds to build places of worship, inspiring an architectural revolution. The laws he passed to protect peasants, slaves, children, and prisoners reflected Christian ideals of charity, and he sponsored councils at Arles, in C.E. 314, and at Nicea, where church authorities formulated important elements of Christian **doctrine**. Constantine is thought to have supported the authority of the Bishop of Rome and also built a Christian presence in his new capital, the Greek city of Byzantium, which became Constantinople.

With the freedom granted them by Constantine, Christian communities grew in number and importance throughout the empire. In C.E. 380, the Emperor Theodosius declared Christianity the official religion of the eastern empire. By modern standards, this act is ill-regarded, as it legitimized the persecution of "heretics" and pagans by the state and church together.

Rome

City in Italy that evolved from a **monarchy**, into a **republic**, and finally into an empire that covered large parts of southern, central, and eastern Europe as well as encircling the Mediterranean Sea. During the time of the Roman Empire (27 B.C.E.–C.E. 476), Rome became the largest and most unified political and cultural influence in ancient Europe.

ORIGINS

The beginnings of Rome were quite modest: in the tenth century B.C.E., inhabitants of the region of Latium in south-central Italy settled along the Tiber River. Close to a water source and protected by a series of hills, these ironworking peoples built thatched huts, farmed the fields, and established marketplaces to trade cattle. They spoke Latin and built temples to their sky god, Jupiter. According to tradition, Rome was said to have been founded in 753 B.C.E. by the twin brothers Romulus and Remus, sons of the war-god Mars, who were raised by a she-wolf on the

hills. Later, the legend evolved that Aeneas, a hero of the Trojan War, had traveled from Asia Minor with a group of exiled Trojans to establish Rome.

Between 625 and 575 B.C.E., the Etruscan culture exerted significant influence over Rome. Tarquinius I (r. 616–579 B.C.E.) became the first Etruscan king of Rome, and his successor, Servius Tullius (r. 578–534 B.C.E.), expanded and reorganized the military. Blending its native Latin civilization with many elements borrowed from Etruscan society, Rome prospered. Trade with Greek colonies in Italy, Sicily, and Gaul (modern-day France) brought the Romans in contact with the religion and culture of **classical** Greece, which would significantly influence the Roman world.

The most powerful element in Roman society was the patrician class, an **aristocratic** nobility of landowners who had special religious privileges and held the highest political offices. The bulk of the population was comprised of the plebeians, or the common citizens. Due to a crime alledgedly committed against a noblewoman named Lucretia, the city expelled its last Etruscan king, Tarquinius Superbus, around 509 B.C.E. The citizens then established a republic ruled by appointed officials known as consuls and advised by two legislative bodies—the assembly, or *curia*, and the senate—comprised of both patricians and plebeians.

THE REPUBLIC

During the years of the republic (509–27 B.C.E.), Rome grew from a vital city to the dominant power of the entire Mediterranean. In the fifth and fourth centuries B.C.E., neighboring communities were annexed by warfare and, in 396 B.C.E., the Roman victory over the Etruscan city of Veii heralded the decline of Etruscan civilization. The Romans' next great rival took the form of Celtic Gauls who marched south and sacked Rome ca. 390 B.C.E., but the invaders were eventually repelled and the city recovered. By 275 B.C.E., Rome ruled most of the Italian peninsula and began to expand to the Mediterranean islands of Sicily, Sardinia, and Corsica.

The growing republic inevitably came into conflict with Carthage, a thriving city-state and seaport

TURNING POINT

Roman Law

The earliest Roman laws were codified in the Twelve Tables, recorded in about 450 B.C.E. during the days of the **republic**. The Tables established the norms by which the law would be applied. Priests served as the interpreters of the law, though later a specialized group of jurists or lawyers took over this task. In the Roman Republic, the assembly proposed new laws, while in the days of the empire this task fell to the senate. The body of laws applied universally to Roman citizens and governed both civil and criminal cases.

An elaborate system of courts developed in which magistrates, or *praetors*, acted as judges, hearing cases and settling disputes. In the provinces, governors and their staff usually handled cases. Punishments varied according to the severity of the crime and whether the offense was public or private. The Romans preferred banishment to imprisonment and either executed offenders or sent them to the mines or gladiator schools.

The formal oath of truth in legal proceedings, the legal contract, and the right of a citizen to appeal a court sentence were all Roman innovations. In addition, a profession dedicated to interpreting and upholding the law was previously unheard of. Roman law survived the dissolution of the empire. Emperor Theodosius II (C.E. 401–450) ordered a new codification in C.E. 438, and Emperor Justinian I (C.E. 483–565) collected the laws into an edition called the *Codex* around C.E. 540. Kingdoms developing in the former Roman provinces, such as that of the Franks, also incorporated elements of Roman law into their own codes. In this way, Roman law profoundly shaped the legal tradition of Europe and the West.

A large open square called a *forum*, lined with buildings used for political, administrative, and religious purposes, served as the center of Roman public life. The Roman Forum was the site of the assassination of Julius Caesar in 44 B.C.E. (Altrendo Panoramic/Altrendo/Getty Images)

in northern Africa whose navy controlled the Mediterranean Sea. Rome fought Carthage in a series of conflicts called the Punic Wars, lasting from 264 to 146 B.C.E., which resulted in Roman control of the western Mediterranean, North Africa, and Spain. Between the 140s and 120s B.C.E., Rome took control of the eastern Mediterranean and absorbed Greece and parts of southern France. New trade routes opened, currency circulated, and Rome grew wealthy.

THE EMPIRE

The republic's expanding military and cultural influence ushered in a new **era** in Rome's **political history**. As Rome grew richer and more powerful, its leaders' commitment to republican ideals began to erode. In the mid-first century B.C.E., the popular and successful Roman general Julius Caesar (100–44 B.C.E.) initiated a civil war when he marched his troops on Rome.

Caesar emerged as Rome's sole leader but enjoyed only a brief rule; his Senatorial adversaries assassinated him in 44 B.C.E., plunging the republic once again into civil war. Caesar's nephew and adopted son, Octavian (63 B.C.E.–C.E. 14), emerged from the conflict as the most powerful Roman citizen, taking the title of *imperator* and calling himself Caesar Augustus. His reign as the first Roman emperor (27 B.C.E.–C.E. 14) marked the beginning of the *Pax Romana*, a 200-year period of relative peace and stability throughout most of Europe. The Roman Empire itself would endure for almost 500 years.

Successive emperors expanded the boundaries of the Roman world, pushing the Celts, the tribes populating central Europe and Britain, to the far reaches of the British Isles. The Danube River provided a much-contested border with the Germanic groups on the empire's northern frontier, and Roman provinces stretched to the Black Sea, covering Asia Minor, Syria, and Egypt. Under the protection Rome's mighty legions, commerce flourished over land and sea routes. Roman customs, the Latin language, and Roman law linked a widely diverse group of peoples, and engineering achievements such as the **aqueduct** brought comfort to Roman cities.

In time, however, the Roman Empire became too large to maintain a central authority and protect its borders from attack by migrating tribes in search of land and resources. Gradually the empire split into two halves. The nominal capital of the empire remained at Rome, while the Emperor Constantine (ca. C.E. 280–337) established an eastern capital at the city of Byzantium, later called Constantinople.

Under able rulers such as Justinian I (C.E. 483–565), the eastern portion of the empire survived for another 1,000 years, but the west suffered steady decline. First, the outer provinces such as Britain and North Africa were lost to invading tribes of Saxons and Vandals between C.E. 380 and 450. The city

of Rome itself experienced successive invasions by the Goths and Huns between C.E. 407 and 451. In C.E. 476, German mercenaries in the Roman army made Odoacer (C.E. 435–493), a member of the emperor's bodyguard, their king. Odoacer forced the last Roman emperor of the west, Romulus Augustulus, to abdicate.

The former provinces of the western Empire eventually developed into separate kingdoms whose rulers kept Roman systems of administration and typically retained Latin as the language of government and high culture. Christianity, which had become the official religion of the empire after C.E. 380, preserved both Latin language and culture throughout the European Middle Ages.

See also: Caesar, Gaius Julius; Culture and Traditions; Etruscan Civilization; Latin; Myths, Epics, and Sagas; Odoacer; *Pax Romana*; Religion; Society.

FURTHER READING

Boatwright, Mary T., Daniel J. Gargola, and Richard J. A. Talbert. *The Romans: From Village to Empire*. New York: Oxford University Press, 2004.

Liberati, Anna Maria, and Fabio Bourbon. *Ancient Rome: History of a Civilization That Ruled the World*. New York: Stewart, Tabori, and Chang, 1996.

Woolf, Greg, ed. *Cambridge Illustrated History of the Roman World*. New York: Cambridge University Press, 2003.

Slavery

Slavery was considered a natural state of affairs in ancient Europe. Virtually every ancient European society, including the Greeks, Romans, Germanic groups, and the Celts, enslaved captives taken in war. In the *Nicomachean Ethics*, the Greek philosopher Aristotle (384–322 B.C.E.) wrote that some people are born to be rulers and others to be subjects.

For the most part, slaves were captives from raids or warfare, citizens who were enslaved as a result of their crimes or debt, or children whose parents were slaves. Although they comprised about a quarter of the population in many early civilizations, slaves had no civic rights, were not paid wages, and did not have legally recognized children or marriages. In very rare instances, slaves of powerful individuals might rise to positions of influence. Most slaves, however, were subjected to hard labor on farms or in shops, in mines and quarries, and at sea.

Slavery in Greece resulted from pressure on landowners who could not sell their wheat because it was being imported at cheaper prices from outside colonies. Farmers turned to cultivating wine and olives, crops that needed more attention, and labor, which could be provided by slaves. People who could not honor their debts became slaves and were excluded from the voting body. Urban populations also provided a market for slave labor; even the average household had a handful of slaves to help with domestic chores.

The first recorded slave auction in Rome took place in 396 B.C.E. Expansion by the Roman **Republic** brought more territory under Roman rule, creating a market for slaves as domestic or agricultural labor. The first Roman slave market was established in 259 B.C.E. Slaves constituted up to 40 percent of the population of Rome. They farmed the estates that provided food for the city, worked the mines and the ships, and built the monumental architecture, such as roads, **aqueducts**, and amphitheaters, that Roman citizens enjoyed.

The practice of slavery declined in the later Roman Empire, as fewer wars for conquest resulted in fewer prisoners of war. After C.E. 400, the Roman provinces moved toward a system where slaves called *coloni* were bound to their work, forced to labor at the same activity in the same location their entire lives. After the fall of the Western Roman Empire in C.E. 476, the Roman system of *coloni* turned into a system of serfdom, in which families remained bound to the land they farmed but had some social rights.

See also: Culture and Traditions; Greece; Rome; Society.

FURTHER READING
Massey, Michael. *Slavery in Ancient Rome*. London: Duckworth, 2002.
Sylvester, Theodore L. *Slavery throughout History*. Detroit, MI: U.X.L, 2000.

Slavs *See* Kievan Rus.

Society

Over the course of early European history, various societies—or the shared institutions, relationships, and common culture and traditions that distinguish one group of people from another—changed in fundamental ways.

In prehistoric Europe, small tribes followed a hunter-gatherer lifestyle as they searched for food over the barren landscape of the Ice Age. Following the retreat of the glaciers, seminomadic lifestyles emerged among various tribes as they migrated across Europe. Especially when communities could depend on food sources furnished by fishing, domesticating animals, or gathering wild crops, more lasting settlements began to form.

After the introduction of agriculture around 6000 B.C.E., permanent settlements emerged across Europe as people claimed land for cultivating crops and raising animals and as societies became more complex. Trade ensured the exchange of ideas and led to the formation of different classes of society, each of which had different responsibilities and status. Wealthy towns grew into kingdoms, and urban civilizations began to appear. Although each of the major groups of early Europeans enjoyed a distinct culture, their political organization and patterns of social relations were often similar.

PREHISTORIC SOCIETY

European history before the introduction of writing is usually classified as the **Paleolithic Period** or **Stone Age**, the **Bronze Age**, and the **Iron Age**. In each **era**, survival-related activities such as procuring food, clothing, and shelter guided the ways in which early society organized itself.

Stone Age

The first humans in Europe, including the Neanderthal and Cro-Magnon peoples, were hunter-gatherers, dividing tasks according to gender: men hunted, while women gathered plants, nuts, berries, and wild grains to supplement the diet. Women also saw to such activities as food preparation and child rearing. Tribes consisted of small groups of families who led a nomadic existence, following their food source, the animal herds, as they moved from pastures to streams. After the last glaciers of the Ice Age melted around 12,000 B.C.E., more of Europe became habitable.

During this **Mesolithic Period**, roughly between 10,000 and 6000 B.C.E., societies in Europe began to domesticate animals such as cattle, sheep, and goats. Stock breeding led to a seminomadic lifestyle as the tribes either followed their roaming livestock or guided the animals to pasture. Slightly more **hierarchical** arrangements developed as groups felt the need to train and support warriors who could fight to claim grazing lands or protect the herd. Because men fought, they tended to make decisions for the tribe, and property frequently passed to sons. Warriors who protected the tribe were generally accorded a higher status.

In the **Neolithic Period**, the development of agriculture led to yet another lifestyle change as early societies had more control over their food supply. Access to fertile land for growing crops and

grazing livestock became an important issue. Agrarian cultures also needed warriors to protect them from people who wanted their land or, when necessary, to seize lands from other people.

With the growth of farming, people stopped living in caves, moved to plains, and began to build houses, creating the first villages and towns. Labor-saving inventions such as the wheel, plow, and sickle produced food surpluses, and a class of **artisans** emerged. A system of barter developed as a form of trade; farmers could exchange produce from their land for pottery, **textiles**, crafts, or other supplies that they did not make themselves.

Bronze and Iron Ages

A three-class social system emerged in most of the societies of ancient Europe. The largest class, the farmers and stock breeders, ensured the food supply. A middle class of artisans produced implements for household use, weapons and armor for fighting, and luxury goods such as jewelry or decorated vessels. The third and highest class included the priests who administered the religion, and the kings or chieftains who maintained authority and offered protection.

Throughout the Iron Age (ca. 750–100 B.C.E.), most Europeans maintained an agrarian economy based on farming and raising cattle or other livestock. They engaged in trade to acquire useful items and waged war when it was necessary to acquire slaves and other wealth, defend their homelands, or seek new lands when drought or famine made their homelands uninhabitable. For the most part, people lived in small villages made up of related families. Tribes identified themselves on the basis of shared ancestry, language, cultural practices, or beliefs, but frequent warfare and intermarriage kept tribal boundaries fluid, especially among the Germanic groups.

Women in these societies left their own tribe when they married and joined their husband's tribe, bringing a small bit of property called a dowry with them. Women continued to be in charge of domestic tasks. Councils of warriors headed by the tribal chieftain made most of the decisions relating to the government of the clan, with the advice of priests or, sometimes, priestesses. The chieftain served as the highest secular authority, maintaining laws, administering punishment, and leading the tribe to war when necessary.

URBAN SOCIETY

The **social history** of southern Europe acquired a distinct character beginning with the Bronze Age, around 3000 B.C.E. Access to the Mediterranean Sea and a favorable climate allowed the societies in this area to produce food and other items for exchange, and a market economy developed. Powerful civilizations grew out of cities that functioned as important trade centers.

Early Crete and Greece

The location of Crete in the western Mediterranean Sea made it a logical site for the development of a society based on sea trade, and the Minoan civilization was that society, emerging around 2600 B.C.E. The Minoans traded farm produce for bronze weapons and other luxury items that were then sold for a profit, making the Minoan king enormously wealthy and influential. The leaders of the most important Minoan cities built elaborate palaces that functioned as the focal points of civic life as well as centers for the collection and redistribution of food. This highly centralized government required a staff of administrators who could collect fees and taxes, keep records, and enforce the king's decrees.

The assurance of a stable food supply and a surplus of wealth supported an artisan class who furnished pottery, paintings, textiles, and other luxury goods. Minoans with leisure time at their disposal engaged in entertainments such as feasts, musical performances, and athletic competitions that attracted large audiences. Minoan art and architecture reflected a refined culture devoted to the appreciation of fine things.

The Minoans with their island civilization had little need for defense and therefore had no military besides the navy that guarded their interests at sea. In contrast, the Mycenaean culture developing on the Greek mainland built large defensive fortresses

LINK TO PLACE

Citizenship in Ancient Greece and in the United States Today

In the ancient Greek *polis*, or city-state, the rules for citizenship varied as individual city-states tended to be autonomous and independent. For the most part, the only citizens who could play a role in government were males over the age of 18 whose parents were also citizens. Females, children, resident foreigners, and slaves had no public power. In democratic city-states such as Athens, all citizens assembled to elect leaders who made policy decisions, formed legislation, and performed judicial roles. Men who had served a term in the highest assembly were not eligible for reelection, a measure that prevented any one person from gaining too much power or influence.

The United States is a **republic** similar to that of early Rome in that it has two chief legislative bodies, a separate legal branch, and a president who, with the help of advisors and staff, makes executive decisions. A system of checks and balances prevents any branch of the government from gaining too much power. In the United States today, all citizens age 18 or older are allowed to vote in public elections. Citizenship is automatically granted if a child is born within U.S. borders or to parents who are U.S. citizens. Amendments to the U.S. Constitution have established that all citizens, regardless of sex, race, religious faith, or physical ability, should have full rights under the law.

and gained its wealth through military expeditions. This society too organized itself around the leadership of a system of kings and their warriors.

Settlements around these protective fortresses led eventually to the city-states of Greece, each of which had an independent form of government and a separate identity. This independence led to a great differentiation in the power, culture, and political role of the various Greek states of the Archaic and **Classical** Ages (ca. 700–323 B.C.E.). Some city-states instituted an oligarchy, where political decisions were made by a few important men. Others established a democracy, where all citizens participated in making political decisions. The city-state of Athens grew into an empire during the Classical Age, leading later scholars and historians to attribute the city's strength and influence to its democratic ideals.

Men in classical Greece served as statesmen, judges, teachers, and playwrights, and only men could vote in the assemblies. Each male citizen's class was determined by the rank of his father, and girls were mainly trained to oversee the household. Women could also be educated but participated rarely in Greek public life.

Etruscan and Roman Societies

The Etruscan civilization, like those of the Greeks and Minoans, was hierarchical and urban, and the economy depended on large farms worked by slaves. The highest authority was the monarch, or absolute ruler, but government also included citizen assemblies, in which commoners were allowed to vote. Males were required to perform military duties—**aristocratic** men served in the cavalry, an innovation that later inspired the Roman equestrian class—and common people served in the infantry. Individual city-states often formed alliances for mutual protection and to advance trade.

The family home in the Etruscan world had a sacred aspect, as the ancestral gods were believed to live under the hearthstone. When she married, a young girl had to **ritually** sever herself from the gods of her household and join herself to her husband's gods. Unlike in most societies in the ancient Mediterranean, Etruscan women participated in public events, including banquets involving elaborate food preparation, music, games, and other performances.

Surpassing and then absorbing the city-states of Etruria, Rome grew from a small village into a vast empire that imposed its culture and traditions on

an enormous variety of people. While earliest Rome was governed by a **monarchy**, Rome moved to a **republican** system of government after expelling its last king around 509 B.C.E. Roman society fell into two main classes, the plebeians or common people and the patricians or aristocrats. Although the plebeians could hold certain offices, the patricians retained control of the senate and the military, thus protecting the interests of their class.

Roman law, codified around 450 B.C.E., outlined how crimes would be judged and punished and applied to all Roman citizens. These laws, as well as the religious institutions and administrative structures of Rome, came to govern a widely heterogeneous mix of people. Indeed, part of Rome's growth rested on its identifying subjected peoples as Roman citizens, thus drawing them into Roman society. However, not all foreigners were granted citizenship. Slaves comprised more than a third of the population in some areas, serving as everything from menial laborers to valued personal attendants.

Rome, too, was a strongly **patriarchal** society. A Roman father had the power to punish his wife if she disobeyed him and to dispose of his children as he wished. Roman girls were rarely educated and married in their early teens, spending their mature life tending to the household. Although they participated little in public events, Roman women could own property and could also have their dowry returned to them if they decided to divorce.

More than the other ancient societies of Europe, Rome influenced the medieval kingdoms that emerged after the fall of the Roman Empire in the west. Kings like Clovis of the Franks (ca. C.E. 465–511) adopted Christianity (the religion of Rome), Latin (the language of Rome), and Roman class structures, administrative networks, legal customs, and family values in an attempt to reclaim the glory of the great empire.

See also: Art and Architecture; Culture and Traditions; Etruscan Civilization; Germanic Groups; Greece; Language and Writing; Minoan Civilization; Myths, Epics, and Sagas; Religion; Rome; Technology and Inventions; Tools and Weapons.

FURTHER READING

Adkins, Lesley, and Roy A. Adkins. *Handbook to Life in Ancient Rome*. New York: Oxford University Press, 1998.

Burenhult, Göran, ed. *The Illustrated History of Mankind*. Vol. 2, *People of the Stone Age: Hunter-Gathers and Early Farmers*. San Francisco: HarperSanFrancisco, 1993.

Early Europe: Mysteries in Stone. By the editors of Time-Life Books. Alexandria, VA: Time-Life Books, 1995.

Mallory, J.P. *In Search of the Indo-Europeans*. Paperback ed. New York: Thames and Hudson, 1991.

Morris, Ian, and Barry B. Powell. *The Greeks: History, Culture and Society*. Upper Saddle River, NJ: Prentice Hall, 2006.

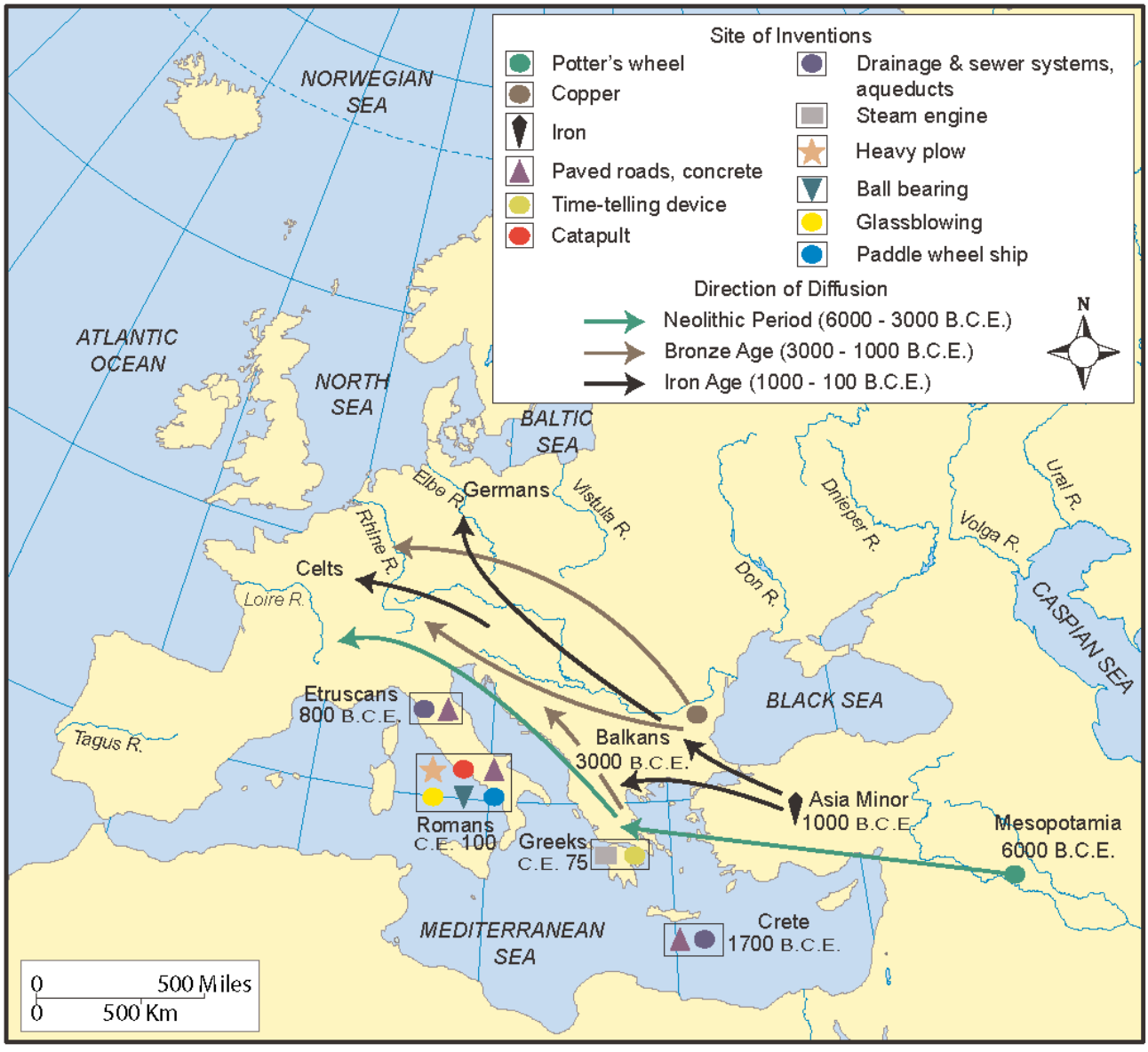
Technology and Inventions

Technology, or the application of scientific method to innovation, particularly to devices that aid or enable human activity, underlies human evolution and had a direct impact on the survival or decline of the civilizations of ancient Europe.

In the **Neolithic Period**, inventions such as the wheel, techniques of farming, weaving, and pottery spread throughout Europe, leading to permanent settlements and labor-saving devices, such as the plow, which helped secure a food supply for growing populations. While metalworking technologies enabled the expansion of the earliest urban civilizations on Crete and in ancient

SPREAD OF TECHNOLOGY, CA. 6000 B.C.E.–C.E. 75

In prehistoric times, technological inventions entered southeastern Europe from the Middle and Near Eastern civilizations of Mesopotamia. Ancient Greek civilizations spanning 2600 to 30 B.C.E., Etruscan civilization flourishing between 800 and 200 B.C.E., and the Roman Empire, C.E. 14–476, developed technological innovations that spread to other parts of Europe by various routes.



Greece, the possession of iron weapons aided the migrations of Celts and Germanic groups and, later, the Huns. **Classical** Greece might have disappeared in the Persian Wars (490–479 B.C.E.) had the Athenians not invented a type of boat that also served as a fighting platform. Imperial Rome (27 B.C.E.–C.E. 476) would not have covered so much of Europe without military machines to support the army that warred with the Celts and Germanic groups.

TECHNOLOGY AND INVENTIONS

ca. 100,000 B.C.E. Neanderthals use flake technique to make tools and bone implements

ca. 40,000 B.C.E. *Homo sapiens* migrate into Europe, using throwing spears to hunt

ca. 25,000 B.C.E. Storage pits in use in Ukraine

ca. 17,000 B.C.E. Cave artists use lamps burning animal fat

ca. 10,000 B.C.E. Bow and arrow come into use in Europe

ca. 6000 B.C.E. First signs of farming communities appear in southern Europe

ca. 4500 B.C.E. Agriculture spreads through Europe

ca. 4200 B.C.E. Earliest megalith tombs built in Portugal

ca. 3000 B.C.E. Bronze implements in use around Mediterranean

ca. 2500 B.C.E. Central and western Europe enter Bronze Age

ca. 1700 B.C.E. Minoan palaces built featuring multiple stories and plumbing systems

ca. 1600 B.C.E. Mycenaean Greeks build bridges, fortified palaces, and beehive-shaped tombs

ca. 1500 B.C.E. Eastern and northern Europe enter Bronze Age

ca. 1000 B.C.E. Ironworking techniques spread from Asia Minor to southern Europe

ca. 750 B.C.E. Ironworking techniques in use by Celts in central Europe

ca. 700 B.C.E. Etruscans build aqueducts and irrigation systems; invent the arch

ca. 300 B.C.E. Celtic smiths invent chain mail, armor made from tiny interlocking iron rings

ca. C.E. 20 Roman architects use lead pipe for plumbing systems

ca. C.E. 75 Heron of Alexandria builds first documented steam engine

ca. C.E. 370 Roman engineers build a paddle-wheel ship

STONE AGE

The **history of science and technology** in Europe traces its roots to the earliest human inhabitants of the region. The two most important inventions in prehistoric Europe were fire and the use of stone tools. Without them, the ancestors of modern Europeans, the Cro-Magnon peoples, would never have survived the Ice Age.

Paleolithic Period

The first technological advance occurred during the Lower **Paleolithic** Period in Europe when people began to chip flakes from a flint core to make a chopper, which served as a knife or scraper. The next advance occurred when toolmakers discovered that chipping both sides of the flint made a two-faced (bifacial) blade that was more useful for cutting; this developed into a hand axe.

During the Middle Paleolithic Period in Europe (ca. 100,000–40,000 B.C.E.), Neanderthal peoples manufactured tools by polishing the fragments struck from larger pieces of stone. They also fashioned a variety of cutting tools and made spearheads, probably used for jabbing but not throwing. Simple bone needles were used to sew skins and furs together as coverings, and fire was used to smoke and store meat.

The Cro-Magnon peoples of Europe in the Upper Paleolithic Period (ca. 40,000–10,000

ANCIENT WEAPONS

Chain Mail

As Celts living in central Europe learning ironworking techniques ca. 750 B.C.E., they found the new metal useful not only for making kitchen tools and farm implements but also weapons and armor. Plate armor, in the form of breastplates to shield the chest and in some cases a set of greaves or covering for the legs, had been in use by warriors of the **Bronze Age**. Skilled Celtic smiths developed a new type of armor that the Romans later called chain mail, made of a series of tiny interlocking iron rings. The first chain mail, made ca. 300 B.C.E., consisted of a series of heavy iron rings sewn onto a thick covering, most likely of leather. In time, the armor makers discovered that the rings could be interlocked to form a type of iron fabric, dense enough to prevent the blade of a sword or the tip of an arrow from sinking into the flesh beneath.

Making mail was an expensive and time-consuming task that required specialized skills and tools. Smiths heated iron in a searing furnace and then pounded it into flat sheets. Using a set a tongs, or in more sophisticated shops a windlass turned with a crank, the smith drew the heated iron through a small hole in a draw-plate. He did this repeatedly until he had made a fine, strong wire. The smith then wrapped the wire around an iron rod and cut the wire into small rings. If at any point the iron became too hard to work, the smith heated the metal again and worked with it as it cooled.

The armor maker linked the many small rings together and then fastened them in place using rivets. Each ring was linked to four neighbors, though later armorers might link six or even eight rings to make a more protective fabric. Since the iron ore used in this process was still rather soft, armor makers toughened the mail coat by rolling the finished shirt in crushed charcoal and then placing it in the forge. As the carbon in the charcoal heated, it hardened the iron on the surface of the coat into steel.

Roman legions invading Gaul or modern-day France in the second century B.C.E. encountered Gaulish warriors wearing the new armor, and the Romans quickly adopted the technology. Roman workshops used punched rings to speed the process of making mail shirts to distribute to the soldiers in the legions.

Among the Germanic groups, only chieftains and the most skilled warriors wore mail shirts, perhaps won in war or given as gifts for service. Frankish law valued a coat of mail as worth two horses or six oxen. Soldiers considered the armor a family heirloom and passed chain mail shirts from father to son. Armies of the Frankish king Charlemagne adopted chain mail during the eighth century C.E., and throughout the Middle Ages mail coverings remained an essential part of the medieval knight's possessions.

B.C.E.) expanded their toolkit to include flint and obsidian blades and developed the throwing spear and the fish hook. They sewed clothing to protect against the cold and constructed pit houses (dwellings dug into the ground) or shelters made of animal hides and bones. They had fine tools for engraving rock faces and carving the small female-shaped statues called Venuses. Cro-Magnon people also made lamps using animal fat to provide light for artists who created the detailed cave paintings found in southwestern Europe.

Mesolithic Period

In the **Mesolithic Period** (ca. 10,000–6000 B.C.E.), early Europeans learned to supplement their diet by gathering roots, nuts, fruits, and wild grain. They domesticated the dog and then sheep, goats,

This stately aqueduct in Segovia, Spain, stands as testament to the Roman genius for engineering and endurance. Many aqueducts built by the ancient Romans to pipe water into their cities still function today. (Albert J. Copley/Photodisc Green/Getty Images)

and horses. They produced small blades called microliths for use in arrows and spears and improved the hand axe by developing the hafted axe, which had a wooden handle. They also developed the bow and arrow. People living along coasts and harbors made the first boats and improved tools for fishing and gathering shellfish like mollusks. Such technological advances allowed these first European settlers to survive extreme climate changes and populate the continent in the wake of the receding glaciers.

Neolithic Period

Beginning with the Neolithic Period, agriculture revolutionized food production and turned many groups from hunter-gatherers into settled communities. This occurred at different times throughout the various regions of Europe, starting around 6000 B.C.E. Neolithic farmers developed the plow and sickle to plant and reap grain and created improved grindstones for making flour. The introduction of the potter's wheel, invented in Mesopotamia, allowed early Europeans to make clay pots they could then use to store, carry, and cook food. Pottery represented a significant improvement over the stone and leather containers used earlier.

Once someone realized that adding wheels to sleds made it easier to transport heavy loads, the wagon came into use. Europeans of the Neolithic Period also learned how to take fibers such as flax or animal products such as hair or wool and weave them together to create **textiles**. With farming practices to furnish a stable food supply and better techniques for storing and preserving food, Neolithic peoples of Europe managed to form villages and support growing populations.

TURNING POINT

The Roman Aqueduct

The Roman **aqueducts** were artificial channels that used gravity to direct water from higher-elevation supplies such as springs and lakes into Roman cities. Although much of the aqueduct was made up of tunnels or watercourses at ground level, many aqueducts were large, bridgelike structures, composed of a series of stone arches that carried the water across valleys and plains. The gentle declining slope of the aqueduct allowed the water to flow from its source to its destination with no need for pumps or any human intervention. Sedimentation tanks located along the watercourse used filters to capture impurities before the water reached the city.

In some cases, Roman engineers used a siphon to channel water through valleys. Internal pressure forced water from a source up a pipe to the tunnel or watercourse beyond. This system was not as common as the stone arches. Once in the city, another series of walls and arches carried the water into the pipes that distributed it to the pools, baths, public fountains, and other receptacles for private use. Eleven aqueducts furnished the daily water supply for the one million people who lived in Rome.

Remains of Roman aqueducts still stand. The Pont du Gard, built between 20 and 16 B.C.E. by Marcus Agrippa, carried water from the Gardon River in southern France to the city of Nemausus (modern-day Nîmes). The structure featured a series of three stone arches 226 feet (69 m) high and still impresses visitors with its engineering as well as its symmetrical beauty. The aqueducts epitomize the blending of functional purpose and elegance of design in Roman architecture.

Favorable geographic conditions such as a warm climate led groups in southern Europe, particularly those living around the Aegean Sea, to develop Europe's earliest urban civilizations. These societies were also located near trade routes that afforded easy access to the latest technological advancements of the East. By contrast, ideas from the Near East and Asia spread to the rest of Europe much more gradually. While the Minoans were building monumental palaces on Crete, the peoples of western Europe were building the massive cairn graves and stone circles that characterize the **megalith** culture.

BRONZE AND IRON AGES

Europe moved out of the **Stone Age** when trading contacts with Africa and the Near East gave southern Europeans the technology to smelt one part tin with nine parts copper to make bronze. Trade in copper, tin, and the bronze tools and weapons they produced spurred economic activity throughout Europe. The civilizations of the Balkan peninsula entered the **Bronze Age** around 3000 B.C.E.; beginning in 2500 B.C.E., bronze trade spread to central and western Europe, while the eastern and northern parts of Europe entered the Bronze Age around 1500 B.C.E.

Beginning around 1000 B.C.E., techniques of smelting iron spread from Asia Minor first to Greece and the Balkans, then later to Italy and central Europe. The development of iron plows improved agriculture, and the creation of iron weapons and armor supported war as well as defense. Unlike the rarer and more costly bronze implements, iron weapons were comparatively cheap to make. Mines across northern Europe provided iron ore, and forests furnished wood for charcoal. Around 300 B.C.E. Celtic smiths developed a type of armor called chain mail, consisting of an interlocked series of tiny iron rings.

INVENTIONS OF THE ANCIENT WORLD

Inventions of the Minoan civilization were designed to enable trade and build comfortable palaces that

GREAT LIVES

Euclid

Euclid was a Greek mathematician who is believed to have lived from around 330 to 270 B.C.E. He taught at the museum in Alexandria, Egypt, which had become an important center of intellectual and cultural life after the time of Alexander III, the Great. Euclid compiled the works of previous and contemporary Greek mathematicians into a thirteen-volume work called *Elements*, which became the most famous and influential of Greek texts. In *Elements*, Euclid approached the subjects of plane and solid geometry and numbers theory using a process of deductive reasoning. He required that each supposition or proposition be supported by proof, and the proof of later theorems depended on the logic of propositions that had been proven earlier.

For centuries to follow, schools across Europe taught mathematics in this fashion, earning Euclid the title of "father of geometry." Euclid also wrote treatises on astronomy and optics, as well as several other works now lost.

functioned as the center of the Minoan world. Using bronze saws, workers cut blocks of stone to furnish building materials for homes and for the roads that connected the Minoan cities. Drainage systems made with stone shafts and clay pipes equipped the houses of the wealthier citizens with sewage facilities. Rainwater from cisterns on the roof was used to flush lavatories, channeling used water to a nearby river.

The Etruscan civilization, which flourished in Italy between 800 and 200 B.C.E., also had paved streets, **aqueducts** to bring water to the cities, and sewer systems to carry it away. A system of dikes and trenches kept farmland fertile through irrigation. The achievements of Etruscan architecture, such as the arch used in the huge vaulted domes of certain tombs, inspired the later Romans to their impressive feats of engineering.

While the Greeks' technological achievements receive less attention than their advances in the arts, Greek engineers were pioneers in several areas. They invented the first portable time-telling devices, the suction pump, and cranes for use in loading and unloading cargo on ships. The Greeks also invented early versions of weapons such as the flame thrower and the crossbow. A Greek device dating to the first century B.C.E., discovered in C.E. 1900 in a shipwreck near Crete, is the earliest machine to use gears. This object, called the *Antikythera*, was apparently designed to calculate positions of the sun and moon as well as the signs of the zodiac. In the first century C.E., Heron of Alexandria invented the first steam engine. He also created several other devices—some functional and some purely for entertainment—that performed tasks such as trimming the wick of an oil lamp or running an automated puppet show.

Roman ingenuity likewise expressed itself in diverse ways. To aid in military conquest, the Romans developed war machines like the *onager*, an enormous catapult, and the *ballista*, which fired a bolt tipped with an iron point. When building the famous Roman roads, surveyors used an instrument called a *groma* to establish the straight line the road would follow. Roman roads, bridges, and tunnels cut through the landscape made transportation faster and supported commerce throughout the empire. The Romans also invented such tools as the heavy plow and the ball bearing. They invented concrete to aid in their massive building projects and perfected the art of glassblowing, enabling the mass production of bottles, flasks, and beakers. Around C.E. 370, Roman engineers built a ship powered not by human effort but by a paddle wheel.

Some historians point out that Rome's adoption of slavery discouraged innovation, because it reduced the need to develop labor-saving devices. Nevertheless, the technological achievements of the Romans remained unequalled until the time of the Renaissance.

See also: Archeological Discoveries; Culture and Traditions; Slavery; Society; Tools and Weapons.

FURTHER READING

Eugene, Toni. *Mysteries of the Ancient World*. Washington, DC: National Geographic Society, 2005.

Fagan, Brian M., ed. *The Seventy Great Inventions of the Ancient World*. New York: Thames and Hudson, 2004.

James, Peter, and Nick Thorpe. *Ancient Inventions*. New York: Ballantine Books, 1994.

Rudgley, Richard. *The Lost Civilizations of the Stone Age*. New York: Free Press, 1999.

Schick, Kathy D., and Nicholas Toth. *Making Silent Stones Speak: Human Evolution and the Dawn of Technology*. New York: Simon and Schuster, 1993.

Tools and Weapons

Advances in toolmaking and weapons technology shaped the course of civilization in ancient Europe. In about 1100 B.C.E., for example, the Dorians of northern Greece used superior iron weaponry to conquer the Mycenaeans, the dominant power in Greece at the time. The Mycenaean civilization had risen to prominence on the strength of its bronze weapons but now found them no match for Dorian technology.

TOOLS

Humans survived in Europe because they could make tools to adapt to their environment and provide food and shelter. The first Europeans made flat pebble choppers by chipping a piece of flint. Over time, they developed more complex tools. The best stone for weapons came from flint or chert, whereas harder stones, such as basalt or sandstone, were used as grindstones. Wood and shell also served as tools or toolmaking materials.

Around 35,000 B.C.E., the Cro-Magnon peoples living in Europe developed tools for boring, scraping, and cutting and also improved the stone weapons used for hunting. Bone and antler furnished materials for finer tools and implements, such as the points of throwing spears or needles. Archeological discoveries have revealed that Cro-Magnon peoples used flint weapons and had toolkits with more than 100 items used for everything from fishing and making clothing to artwork.

With the arrival of agriculture in the **Neolithic Period** came stone axes, which farmers could use to cut down forests and create fields for planting. Stone tools of the Neolithic Period were polished instead of merely chipped, resulting in smoother and more efficient cutting surfaces. Neolithic farmers developed sickle blades to cut their grain, grindstones to turn grain into flour, and pottery to store flour and to aid in other food-gathering tasks.

Southern Europe entered the **Bronze Age** around 3000 B.C.E. when Europeans living in the Cyclades, a group of islands in the Aegean Sea, began to smelt copper and tin to make bronze. The Minoan civilization of ancient Crete also used bronze implements and weapons. Around 1000 B.C.E., groups living in eastern Europe learned the technique of ironworking from their neighbors in Asia Minor (modern-day Turkey). By 750 B.C.E., the Celts living in central Europe had entered the **Iron Age.** They used iron in knives, shears, axe heads,

ANCIENT WEAPONS

The Roman Chariot

During the **Bronze** and **Iron Ages**, the chariot, a two-wheeled vehicle drawn by horses, served as a weapon in battle for many Asian and European armies. The heroes of the Trojan War rode chariots into battle and staged chariot races as part of the funeral games to celebrate the death of a warrior. The Persian king Darius III (r. 336–330 B.C.E.) used chariots, though unsuccessfully, against Alexander III, the Great (356–323 B.C.E.). Remains of chariots have been found in several Celtic graves and in an Etruscan burial site, perhaps as a ceremonial transport to the next world.

The Romans never adopted the chariot for warfare, but prized it for ceremony and entertainment. In the triumphal procession held to honor a successful military general, four horses pulled the gilded chariot in which the triumphal man rode. The victorious warrior, his face painted red, carried an ivory scepter and a laurel wreath that symbolized victory, and wore the purple toga that represented imperial power. In the days of the empire, only the emperor or members of the imperial family could hold a triumph.

Chariot races, however, became one of the most popular forms of entertainment, appealing to all strata of the Roman populace. In the Circus Maximus in Rome, more than 260,000 spectators crowded to see the competitors race seven times around the oval track, competing to spill or overturn their opponents. After each lap, slaves posted at one of the bends poured water on the overheated wheels. Victors won the laurel wreath, a large sum of money, and, in the case of gladiators or slaves made charioteers, their freedom. The frequency of charioteers and chariot motifs depicted on pottery, coins, and household objects attests to the enduring popularity of these games, and skilled charioteers earned as much admiration as the sports heroes of today.

plows, and cooking pots, as well as in the chains used for hanging cooking cauldrons over a fire. Copper and tin remained in demand for bronze objects, such as cauldrons, bowls, drinking vessels, mirrors, and decorative ornaments, but basic tools, such as the scissors, saw, billhook, boathook, and sickle, were made of iron.

WEAPONS

Bronze daggers, swords, and spearheads circulated through Crete and early Greece in the second and third millennia B.C.E. The first bronze daggers had a simple ridged blade and a handle of bone or wood. Some of the earliest bronze swords had a "rat-tailed" construction, named for the bent tip used to attach the blade to the hilt. The narrow, leaf-shaped blades of the spearhead were strengthened with a rib down the center and joined to a wooden shaft. Metalworkers also developed bronze armor, beneath which soldiers wore leather or linen padding for comfort.

In Mycenaean Greece in the late Bronze Age, between 1500 and 1100 B.C.E., warriors owned shields shaped like figure eights, bronze breastplates, helmets, thrusting spears, and long swords. Some warriors wore bronze greaves to protect their legs, and archers had bronze wrist guards. These are the weapons carried by heroes in **classical** Greek legends about the Trojan War. Complex fortifications, chariots, and warships also served as tools for defense and attack.

Where once the development of more efficient tools marked the advancement of human culture, now the possession of better weapons and armor changed the fortunes of the peoples of Europe. The Mycenaeans still had weapons made of bronze when the Dorians, tribes from northern Greece armed with iron weapons, invaded ca. 1100 B.C.E.

The cemetery near Hallstatt, Austria, discovered in C.E. 1846, yielded several artifacts that illuminated the lives of Iron Age Celts. The artifacts included an assortment of jewelry, pottery, and iron weapons. This bronze axe head, which is decorated with a seated warrior, was probably used for ceremonial purposes. (Erich Lessing/Art Resource, NY)

The iron weapons may not have been more efficient, but they were cheaper to make, more readily available, and, therefore, more members of the society could be armed.

During the Iron Age, smiths crafted sword blades made with cores of softer metal for flexibility and hard exteriors to hold the edges. Other iron weapons included lances, spears, arrow points, and one-edged swords.

In the eighth century B.C.E., the Greeks developed an infantry known as *hoplites*. These heavily armored warriors carried long lances, round shields on their left arms, and thrusting spears. The helmet was made of bronze and the corselet and greaves were made of linen, leather, or perhaps metal. These weapons allowed close-formation fighting, a tactic more deadly than the earlier style of individual combat, which resulted in higher casualties in conflicts like the Persian Wars (490–479 B.C.E.) or the Peloponnesian War (431–404 B.C.E.). Alexander III, the Great (356–323 B.C.E.), the Macedonian king who conquered parts of Europe, Africa, and Asia, had the same weaponry and armor available to him during his conquests; his success depended on his strategy and his effective use of the *phalanx*, a squadron of infantry eight to 36 men deep.

The early Romans also used the phalanx formation and fought with spears, swords, and armor, but they gradually replaced the round hoplite shield with a long oval shield, developed a longer double-edged sword, and used a throwing spear or *pilum*. In the fourth century B.C.E., Roman generals organized their fighting men into legions. Although the Romans developed a professional navy and also had a class of cavalry, or warriors who fought on horseback, the bulk of Roman military might rested in the legion of infantry. The Roman system of professional soldiering produced a vast force of highly trained and dedicated soldiers who helped push the boundaries of the Roman Empire as far as Britain and Arabia. In time, however, the area of the empire exceeded the number of soldiers available to protect it, and Rome fell to the Germanic groups it had once attempted to subdue.

See also: Agriculture; Archeological Discoveries; Technology and Inventions.

FURTHER READING

Mayor, Adrienne. *Greek Fire, Poison Arrows, and Scorpion Bombs: Biological and Chemical Warfare in the Ancient World*. Woodstock, NY: Overlook Duckworth, 2003.

Schick, Kathy D., and Nicholas Toth. *Making Silent Stones Speak: Human Evolution and the Dawn of Technology*. New York: Simon and Schuster, 1993.

Warry, John. *Warfare in the Classical World: An Illustrated Encyclopedia of Weapons, Warriors, and Warfare in the Ancient Civilisations of Greece and Rome*. Reprint, Norman: University of Oklahoma Press, 1995.

Trojan War

Conflict fought in the thirteenth century B.C.E. between the Mycenaean Greeks and the inhabitants of Troy, a city on the west coast of Asia Minor (modern-day Turkey). Tales of the origin, battles, and aftermath of the war were recorded in the epic poems the *Iliad* and the *Odyssey* (ca. 750 B.C.E.), attributed to the Greek poet Homer. These works inspired the art and literature of western Europe for centuries to follow.

Readers and scholars throughout the ages have debated whether Homer's epic poems depicted an actual event or merely a legendary tale. Based on archeological evidence, however, historians now generally agree that the war actually occurred, even though Homer's account of it is highly romanticized. Ironically, although the Trojan War is now accepted as fact, scholars still are not certain whether Homer himself was an actual historical figure.

According to Homer, the Trojans instigated the war when Paris, a prince of Troy, carried off Helen, wife of the Spartan king Menelaus and considered the most beautiful woman in the world. Menelaus then joined forces with his brother Agamemnon, king of Mycenaean Greece, to recover Helen and punish the Trojans. Although the epic retellings added embellishments, turning the story into a quarrel over a woman and an exercise in heroic valor, the Trojan War probably had its roots in disputes over trade rights and access to the waterways controlled by ancient Troy.

Homer relates that the Greeks launched 1,000 ships carrying troops to attack Troy and win Helen back. After a 10-year siege, the city fell to its attackers due to a famous ruse. The Greeks made a great show of abandoning the siege, leaving behind an enormous wooden horse as an offering to the gods. The Trojans, convinced that they had driven off the Greeks, brought the horse into the city. However, Greek warriors, who had secretly hidden inside the horse, emerged after nightfall, killing the inhabitants and sacking and burning the city.

The Greeks accepted the Trojan War as a true part of their history, and the story of Troy held an enduring claim on the Western imagination. The Roman poet Virgil (70–19 B.C.E.) wrote the *Aeneid* (19 B.C.E.), which described how the Trojan prince Aeneas, after escaping the burning city, went on to found Rome. Building on the Roman myth in an effort to enhance their status, later peoples in Europe claimed that their descendants, including the Franks and the Norsemen, were also from Troy.

In C.E. 1871, Heinrich Schliemann, a German antiquarian who had long been fascinated with tales of the Trojan War, began a systemic search to find the ruins of ancient Troy. Using details from Homer's poems, he identified a site at Hissilark, in Turkey, as the Homeric city of Troy. Schliemann's

This fifteenth-century C.E. wood panel of a scene from Homer's *Iliad* demonstrates the enduring fascination that Europeans had for the Trojan War, supposedly waged between the ancient Greeks and the residents of Troy around 1180 B.C.E. (Réunion des Musées Nationaux/Art Resource, NY)

diggings uncovered the ruins of a city that had stood since the **Bronze Age** and had been destroyed and rebuilt many times. Based on evidence of a massive destruction around 1250 B.C.E., scholars now generally accept Schliemann's claim that Hissilark was the site of the legendary Troy.

See also: Greece; Myths, Epics, and Sagas; Rome.

FURTHER READING

Homer. *Iliad*. Trans. Robert Fagles. New York: Penguin Classics, 1998.

Homer. *The Odyssey of Homer*. Trans. Richard Lattimore. New York: Harper Perennial, 1999.

Troy

See Trojan War.

Vikings

See Norsemen.

Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationships A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretations/analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history of science and technology Study of the evolution of scientific discoveries and technological advancements

history, cultural An analysis of history in terms of a people's culture, or way of life, including investigating patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political An analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remain consistent or show marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radio-carbon dating A test for determining the approximate age of an object or artifact by measuring the number of carbon 14 atoms in that object

social history See history, social

Key Terms Found in A to Z Entries

antiquity The ancient past, particularly referring to the history of the western world before the fall of the Roman Empire in C.E. 476

aqueduct A channel built to carry water over distances; also refers to the pipes or the bridgelike structures that support the channel across a river or valley

archeologist A scientist who studies prehistoric people and their culture

aristocratic In a society, belonging to the nobility or the ruling class, whose wealth is generally based on land and whose power is passed from one generation to another

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament

artisan A skilled craftsperson or worker who practices a trade or handicraft

Bronze Age Historical period in European history marked by the introduction of bronze for tools and weapons, beginning in southern Europe ca. 3000 B.C.E and in central Europe ca. 2500 B.C.E

classical Term applied to the culture that flourished between 480 and 323 B.C.E. in Greece

colonization The establishment of settlements in areas outside a group's home territory

doctrine A set of principles presented for acceptance or belief, such as by a religious, political, or philosophical group

genetics The study of the biology of heredity, the qualities passed from one organism to another through reproduction

glyphs Symbolic figures that hold a specific meaning, often incised or engraved into a surface

Hellenistic Describing Greek culture from the time of Alexander III, the Great (356–323 B.C.E.), to approximately the first century B.C.E., when the Greek language and ideas were carried to the non-Greek world

hierarchical Describing an organization, especially of persons, that ranks people by authority or importance

hieroglyphic Picture or symbol representing a word, syllable, or sound used by the ancient Egyptians and others

Ice Age An extended period of extremely low temperatures; there have been many ice ages in the history of the earth

inscription Writing carved or engraved on a surface such as a coin, tablet, or stone monument

Iron Age The period in European history, following the Bronze Age, marked by the introduction of ironworking technology; ironworking techniques reached eastern Europe ca. C.E. 1000 but came into regular use in central Europe from about 750 to 100 B.C.E.

linguist A person who studies human speech, especially a particular language or means of communication

logograms Pictograms standing for whole words, part of the syllabary system of writing

material culture Term used by archeologists to refer to the items used by a particular group of people, including tools, weaponry, jewelry, houses, and burial practices

megalith A large structure made of stone; used particularly to describe enormous circles, tombs, and other stone constructions of Bronze Age Europe

Mesolithic Period Era also known as the Middle Stone Age, characterized by the adoption of the bow and flint tools and ending with the introduction of agriculture; lasted aroughly from 10,000 to 6,000 B.C.E. for most of Europe

monarchy Form of government in which a state is headed by a single hereditary ruler

Neolithic Period Also known as the New Stone Age, an interval in human culture starting with the invention of agriculture and ending with the introduction of the first metal implements and weapons; began around 6,000 B.C.E in southern Europe and around 4,500 B.C.E. in central Europe

Neolithic Revolution Period between 8,000 to 6000 B.C.E. during which the transition from hunting and gathering to agriculture occurred in the Near and Southwest Asia; by 4000 B.C.E., the Neeolithic Revolution had spread through most of Europe

oracle A shrine, or religious figure serving at that shrine, consulted for religious purposes, particularly giving advice or foretelling the future

Paleolithic Period Also called the "Old Stone" Age, from the Greek, the period in human development from about 450,000 to 10,000 B.C.E., beginning with the use of the earliest stone tools and ending with the adoption of the bow and flint tools; historians further classify the era as the Lower Paleolithic Period (about 450,000 to 100,000 B.C.E.), Middle Paleolithic Period (100,000 to 40,000 B.C.E.), and Upper Paleolithic Period (40,000 to 10,000 B.C.E.)

pantheon All the gods of a people, or a temple dedicated to all the gods of a people

patriarchal A type of society ruled of male leaders, where men typically possess sole religious, political, and domestic authority

petroglyph (see also: **glyphs**) A symbolic figure engraved on a stone surface

pictogram A picture standing for whole words, part of the syllabary system of writing

pictograph A pictorial representation of a word or idea

primitive Pertaining to an earlier, simpler state; may particularly refer to early stages in the development of human culture before the development of writing

relief A type of sculpture where raised figures project from a flat surface, giving the appearance of dimension

republic Political system in which the head of state is not a monarch and in which the supreme power lies in a body of citizens who are entitled to vote for representatives responsible to them

rhetoric The art of oratory and the persuasive use of language

ritual An act or procedure following a set order or form; often contains a ceremonial or religious importance

Stone Age see: **Paleolithic Period**; **Mesolithic Period**; **Neolithic Period**

subjugation Condition in which one person or group is made subservient or obedient to another person or group

syllabary A writing system consisting of symbols representing vowels and consonants, as well as logograms or pictograms that stand for whole words

textiles Items made of cloth or fabric, or the fibers used to weave a fabric

Selected Bibliography

Adkins, Lesley, and Roy A. Adkins. *Handbook to Life in Ancient Greece*. New York: Facts On File, 2004.

———. *Handbook to Life in Ancient Rome*. New York: Facts On File, 1994.

Ancient Civilizations. 25 April 2005. Hastings and Prince Edward District School Board. Accessed 20 Aug 2006. http://www.hpedsb.on.ca/sg/quinte/ancient_civilizations.htm.

Auerbach, Loren, and Jacqueline Simpson. *Sagas of the Norsemen: Viking and German Myth*. With the editors of Time-Life Books. Myth and Mankind. Amsterdam: Time-Life Books, 1997.

Bahn, Paul G., ed. *The Cambridge Illustrated History of Archaeology*. New York: Cambridge University Press, 1996.

Boatwright, Mary T., Daniel J. Gargola, and Richard J.A. Talbert. *The Romans: From Village to Empire*. New York: Oxford University Press, 2004.

Bokenkotter, Thomas S. *A Concise History of the Catholic Church*. Rev. ed. New York: Doubleday, 2004.

Bolles, Edmund Blair. *The Ice Finders: How a Poet, a Professor, and a Politician Discovered the Ice Age*. Washington, DC: Counterpoint, 1999.

Borrelli, Federica, and Maria Cristine Targia. *The Etruscans: Art, Architecture, and History*. Eds. Stefano Peccatori and Stefano Zuffi. Trans. Michael Hartmann. Los Angeles: Getty Trust Publications. 2004.

Browning, Robert, ed. *The Greek World: Classical, Byzantine, and Modern*. London: Thames and Hudson, 1985.

Bulfinch, Thomas. *Bulfinch's Mythology*. Introduction and notes by Richard P. Martin. New York: HarperCollins, 1991.

Burckhardt, Jacob. *The Greeks and Greek Civilization*. Translated by Sheila Stern. Edited with an introduction by Oswyn Murray. New York: St. Martin's Press, 1998.

Burenhult, Göran, ed. *The Illustrated History of Mankind*. Vol. 1, *The First Humans: Human Origins and History to 10,000 B.C.* San Francisco: HarperSanFrancisco, 1993.

———, ed. *The Illustrated History of Mankind*. Vol. 2, *People of the Stone Age: Hunter-Gathers and Early Farmers*. San Francisco: HarperSanFrancisco, 1993.

Bury, J.B. *History of the Later Roman Empire from the Death of Theodosius I to the Death of Justinian*. Vol. 2. Reprint, New York: Dover Publications, 1958.

Buxton, Richard. *The Complete World of Greek Mythology*. London: Thames and Hudson, 2004.

Cantor, Norman F. *Antiquity: The Civilization of the Ancient World*. New York: HarperCollins, 2003.

Cartledge, Paul. *Alexander the Great: The Hunt for a New Past*. Woodstock, NY: The Overlook Press, 2004.

———, ed. *Cambridge Illustrated History of Ancient Greece*. Cambridge: Cambridge University Press, 2002.

Christiansen, Eric. *The Norsemen in the Viking Age*. Oxford: Blackwell, 2002.

Collins, Michael, and Matthew A. Price. *The Story of Christianity: 2,000 Years of Faith*. New York: DK Publishing, 1999.

Currier, Richard L. *Weapons and Warfare in Ancient Times*. By Rivka Gonen. Retold for young readers by Richard L. Currier. Minneapolis: Lerner, 1977.

Davis, Joel. *Mother Tongue: How Humans Create Language*. New York: Carol Publishing Group, 1994.

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W.W. Norton, 1997.

Diringer, David. *Writing*. New York: Praeger, 1962.

Drinkwater, J.F. *Roman Gaul: The Three Provinces, 58 BC–AD 260*. Ithaca, NY: Cornell University Press, 1983.

Eagleton, Terry. *The Idea of Culture*. Malden, MA: Blackwell, 2000.

Earl, Donald C. *The Age of Augustus*. New York: Crown, 1968.

Early Europe: Mysteries in Stone. By the editors of Time-Life Books. Alexandria, VA: Time-Life Books, 1995.

Ellis, Peter Berresford. *The Celtic Empire: The First Millennium of Celtic History, c. 1000 BC–51 AD*. New York: Carroll and Graf, 2001.

Elsner, Jaś. *Imperial Rome and Christian Triumph: The Art of the Roman Empire AD 100–450*. New York: Oxford University Press, 2001.

Eugene, Toni. *Mysteries of the Ancient World*. Washington, DC: National Geographic Society, 2005.

"Europe." *Encyclopedia Mythica*. Accessed 20 Aug 2006. http://www.pantheon.org/areas/mythology/europe/.

European University Institute. *WWW-VL History Central Catalogue*. 20 June 2006. World Wide Web Virtual Library hosted by Indiana University. Accessed 20 Aug 2006. http://rmweb.indiana.edu/History/VL/in(iex.html.

Fagan, Brian M. *The Adventure of Archaeology*. Rev. ed. Washington, DC: National Geographic Society, 1989.

Fernández-Armesto, Felipe. *Civilizations: Culture, Ambition, and the Transformation of Nature*. New York: Free Press, 2001.

Fildes, Alan, and Joann Fletcher. *Alexander the Great: Son of the Gods*. Los Angeles: J. Paul Getty Museum, 2002.

Gabucci, Ada. *Ancient Rome: Art, Architecture, and History*. Eds. Stefano Peccatori and Stefano Zuffi. Trans. Michael Hartmann. Los Angeles: Getty Trust Publications. 2002.

Geerts, L.C. "Ancient Europe." *Earth's Ancient History: A Website dedicated to Ancient Times*. 22 Jan 2006. Earthhistory.com. Accessed 20 Aug 2006. http: //www. earthhistory.com/Europe/.

Goldsworthy, Adrian. *The Punic Wars*. London: Cassell, 2000.

Grant, Michael. *Caesar*. Reprint, Chicago: Follett, 1975.

———. *The Roman Emperors: A Biographical Guide to the Rulers of Imperial Rome, 31 BC–AD 476*. New York: Barnes and Noble Books, 1985.

Green, Miranda J. *Dictionary of Celtic Myth and Legend*. London: Thames and Hudson, 1992.

Green, Peter. *Alexander the Great*. New York: Praeger, 1970.

Gregory of Tours. *The History of the Franks*. Trans. Ernest Brehaut. New York: Octagon Books, 1965.

Hadingham, Evan. *Secrets of the Ice Age: The World of the Cave Artists*. New York: Walker, 1979.

Harding, Thomas G., et al. *Evolution and Culture*. Ed. Marshall D. Sahlins and Elman R. Service. Ann Arbor: University of Michigan Press, 1960.

Hathaway, Nancy. *The Friendly Guide to Mythology: A Mortal's Companion to the Fantastical Realm of Gods, Goddesses, Monsters, and Heroes*. New York: Penguin Books, 2001.

Haywood, John. *Atlas of the Celtic World*. London: Thames and Hudson, 2001.

Helle, Knut, ed. *The Cambridge History of Scandinavia*. Vol. 1, *Prehistory to 1520*. Cambridge: Cambridge University Press, 2003.

Henige, Christopher. "European Prehistoric Cultures." *Before History: An Online Exhibition*. Logan Museum, Beloit College. Accessed 20 Aug 2006. http://www.beloit.edu/~museum/logan/paleoexhibit/menueurope .htm.

Herodotus. *The Persian Wars*. Trans. William Shepherd. New York: Cambridge University Press, 1982.

The History Channel. *History.com*. A&E Television Networks. Accessed 20 Aug 2006. http: //www. historychannel. com/.

Homer. *Iliad*. Trans. Robert Fagles. New York: Penguin Classics, 1998.

Homer. *The Odyssey of Homer*. Trans. Richard Lattimore. New York: Harper Perennial.

Hosking, Geoffrey. *Russia and the Russians: A History*. Cambridge, MA: Harvard University Press, 2001.

Hurdman, Charlotte, Philip Steele, and Richard Tames. *The Encyclopedia of the Ancient World: How People Lived in the Stone Age, Ancient Egypt, Ancient Greece, and the Roman Empire*. London: Anness, 2000.

James, Simon. *The World of the Celts*. London: Thames and Hudson, 1993.

Jesch, Judith, ed. *The Scandinavians from the Vendel Period to the Tenth Century: An Ethnographic Perspective*. Woodbridge, UK: Boydell Press, 2002.

Johnson, Paul. *Art: A New History*. New York: HarperCollins, 2003.

Jones, Prudence, and Nigel Pennick. *A History of Pagan Europe*. New York: Routledge, 1995.

Jordan, Paul. *Neanderthal: Neanderthal Man and the Search for Human Origins*. Gloucestershire, UK: Sutton, 1999.

Kagan, Donald. *The Peloponnesian War*. New York: Viking, 2003.

Keller, Werner. *The Etruscans*. Trans. Alexander Henderson and Elizabeth Henderson. New York: Knopf, 1974.

Kreis, Steven. "Lectures on Ancient and Medieval European History." *The History Guide*. 28 Feb 2006. Accessed 20 Aug 2006. http://www.historyguide.org/ancient /ancient. html.

Laing, Jennifer. *Warriors of the Dark Ages*. Stroud, UK: Sutton, 2000.

Leakey, Richard. *The Origin of Humankind*. New York: Basic Books, 1994.

Leakey, Richard, and Roger Lewin. *Origins Reconsidered: In Search of What Makes us Human*. New York: Doubleday, 1992.

Levey, Michael. *A History of Western Art*. New York: Praeger, 1968.

Liberati, Anna Maria, and Fabio Bourbon. *Ancient Rome: History of a Civilization That Ruled the World*. New York: Stewart, Tabori, and Chang, 1996.

MacDougall, Doug. *Frozen Earth: The Once and Future Story of Ice Ages*. Berkeley: University of California Press, 2004.

Markale, Jean. *The Celts: Uncovering the Mythic and Historic Origins of Western Culture*. Rochester, VT: Inner Traditions International, 1993.

Martin, Thomas R. *Ancient Greece: From Prehistoric to Hellenistic Times*. New Haven, CT: Yale University Press, 1996.

Matz, David. *Daily Life of the Ancient Romans*. Westport, CT: Greenwood Press, 2002.

Mayor, Adrienne. *Greek Fire, Poison Arrows, and Scorpion Bombs: Biological and Chemical Warfare in the Ancient World*. Woodstock, NY: Overlook Duckworth, 2003.

Mazonowicz, Douglas. *Voices from the Stone Age: A Search for Cave and Canyon Art*. New York: Crowell, 1974.

Mazoyer, Marcel, and Laurence Roudart. *History of World Agriculture: From the Neolithic Age to the Current Crisis*. Trans. James H. Membrez. New York: Monthly Review Press, 2005.

Mohr, James, et al. "European History." *Mapping History Project*. Aug 1997. University of Oregon. Accessed 20 Aug 2006. http://darkwing.uoregon.edu/~atlas/english/EU/eu.html.

Monaghan, Patricia. *The Encyclopedia of Celtic Mythology and Folklore*. New York: Facts On File, 2004.

Murray, Gilbert. *The Rise of the Greek Epic*. Rev. ed. New York: Oxford University Press, 1960.

Ostler, Nicholas. *Empires of the Word: A Language History of the World*. New York: HarperCollins, 2005.

Paden, William E. *Religious Worlds: The Comparative Study of Religion*. Boston: Beacon Press, 1988.

Parenti, Michael. *The Assassination of Julius Caesar: A People's History of Ancient Rome*. New York: New Press, 2003.

Partner, Peter. *Two Thousand Years*. Vol. 1, *The First Millennium: The Birth of Christianity to the Crusades*. London: Granada Media, 1999.

Plato. *The Collected Dialogues of Plato, Including the Letters*. Edited by Edith Hamilton and Huntington Cairns. Rev. ed. Princeton, NJ: Princeton University Press, 1999.

Platon, Nicolas. *Crete*. Cleveland, OH: World, 1966.

Powell, T.G.E. *The Celts*. London: Thames and Hudson, 1983.

Presland, Thomas. *Timelines.Info*. 1 Nov 2001. Conceive, Ltd. Accessed 20 Aug 2006. http://www.timelines.info/.

Renfrew, Colin. *Archeology and Language: The Puzzle of Indo-European Origins*. New York: Cambridge University Press, 1988.

Reverdin, Olivier. *Crete and its Treasures*. New York: Viking Press, 1961.

Reynolds, L.D., and N.G. Wilson. *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature*. 2nd ed. Oxford: Clarendon Press, 1974.

Ross, Sir W. David. *Aristotle*. 6th ed. New York: Routledge, 1995.

Rudgley, Richard. *The Lost Civilizations of the Stone Age*. New York: Free Press, 1999.

Ruhlen, Merritt. *The Origin of Language: Tracing the Evolution of the Mother Tongue*. New York: Wiley, 1994.

Ruspoli, Mario. *The Cave of Lascaux: The Final Photographs*. New York: Abrams, 1987.

The Sagas of Icelanders: A Selection. Preface by Jane Smiley. Introduction by Robert Kellogg. New York. Viking, 2000.

Sawyer, Peter, ed. *The Oxford Illustrated History of the Vikings*. Paperback ed. New York: Oxford University Press, 2001.

Scarre, Chris. *Chronicle of the Roman Emperors: The Reign-by-Reign Record of the Rulers of Imperial Rome*. London: Thames and Hudson, 1995.

———. *Exploring Prehistoric Europe*. New York: Oxford University Press, 1998.

Sherratt, Andrew. *Economy and Society in Prehistoric Europe: Changing Perspectives*. Princeton, NJ: Princeton University Press, 1997.

Simons, Gerald. *Barbarian Europe*. With the editors of Time-Life Books. New York: Time-Life Books, 1968.

Simpson, Jacqueline. *Everyday Life in the Viking Age*. London: Batsford; New York: Putnam, 1967.

Starr, Chester G. *The Roman Empire: 27 B.C.–A.D. 476: A Study in Survival*. New York: Oxford University Press, 1982.

Strauss, Barry. *The Battle of Salamis: The Naval Encounter That Saved Greece—and Western Civilization*. New York: Simon and Schuster, 2004.

Subtelny, Orest. *Ukraine: A History*. 2nd ed. Toronto and Buffalo, NY: University of Toronto Press, 1994.

Sylvester, Theodore L. *Slavery throughout History: Almanac*. Detroit, MI: U.X.L, 2000.

Tattersall, Ian. *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of Our Closest Human Relatives*. New York: Macmillan, 1995.

Thorpe, I.J. *The Origins of Agriculture in Europe*. New York: Routledge, 1999.

Turk, Eleanor L. *The History of Germany*. Westport, CT: Greenwood Press, 1999.

Turville-Petre, Gabriel. *Origins of Icelandic Literature*. Reprint, Oxford: Clarendon Press, 1967.

Unsworth, Barry. *Crete*. Washington, DC: National Geographic, 2004.

Vogt, Joseph. *The Decline of Rome: The Metamorphosis of Ancient Civilization*. Trans. Janet Sondheimer. Reprint, New York: New American Library, 1968.

Wacher, John. *The Roman Empire*. New York: Barnes and Noble Books, 1997.

Walker, Williston. *A History of the Christian Church*. Revised by Richard A. Norris, David W. Lotz, and Robert T. Handy. 4th ed. New York: Scribner, 1985.

Ward-Perkins, J.B., and Amanda Claridge. *Pompeii A.D. 79: Essay and Catalogue*. New York: Knopf, 1978.

Warner, Rex. *Athens at War*. Retold from *The History of the Peloponnesian War* by Thucydides. Reprint, New York: Dutton, 1971.

Wells, Peter S. *The Barbarians Speak: How the Conquered Peoples Shaped Roman Europe*. Princeton, NJ: Princeton University Press, 1999.

White, L. Michael. *From Jesus to Christianity*. San Francisco: HarperSanFrancisco, 2004.

Wilcken, Ulrich. *Alexander the Great*. Trans. G.C. Richards. New York: W.W. Norton, 1967.

Wood, Michael. *In Search of the Trojan War*. New York: Facts On File, 1985.

———. *Legacy: The Search for Ancient Cultures*. New York: Sterling, 1994.

Woolf, Greg, ed. *Cambridge Illustrated History of the Roman World*. New York: Cambridge University Press, 2003.

Zanker, Paul. *Pompeii: Public and Private Life*. Trans. Deborah Lucas Schneider. Cambridge, MA: Harvard University Press, 1998.

Index

Note: bold entries indicate glossary term; *t* indicates timeline; *m* indicates map; *p* indicates photo.

A

Achaens, 47
Acheulian culture, 7*t*, 10, 32
Acropolis, 49*p*
Aeneas, 67, 68, 94, 111
Aeneid (Virgil), 65*t*, 68, 111
Aetius (Roman general), 50
Agamemnon, 111
Agriculture, xiii, 103*t*
  Bronze Age, 33, 61
  Celtic, 3, 24–25
  Crete, 1, 11, 29, 61
  crop types andand yields, 3–4
  deities, 2
  Etruscan, 38, 100
  gender roles, 3–4, 25
  Germanic groups, 3, 45
  Greece, 1, 4, 11
  hunting-gathering *vs.*, 11, 51
  origins, 1–2, 7*t*
  religion and, 2
  Rome, 4
  slavery and, 4, 97
  social class and, 2–3, 24, 99, 100
  Stone Age, 32, 98–99, 106
  technology andand inventions, 1, 2, 3, 4, 101
Alcibiades, 81
Alexander the Great, xiv, 4–6, 49, 66
All Soul's Day, 34
Alphabet, 57, 57*t*, 58–59
  See also Language; Runes; Writing
Altaic languages, 56, 56*m*
Altamira, Spain, 7*t*, 22
Animals
  extinction, 51
  worship of, 62
Antikythera, 107
Antiquarians, 10
Antiquity, 14, 53, 114
Aphrodite, 66
Apollo, 91
Apollo, Temple of, 90*p*
Apollonios of Rhodes, 65*t*, 68
Aqueducts, 103*t*, 105*p*, 106, 107, 114
Archaic Age (Greece), xiv, 16, 47–48
Archeological discoveries, 6–13
Archeologists, 9, 114
Arches, 18
Architecture. *See* Art andand architecture
Ares, 67
Argonautika (Apollonios of Rhodes), 65*t*
Argos, 81
Aristagoras, 83, 84*t*
Aristocratic class
  Caesar, 19
  defined, 114
  Etruscan, 100
  Greece, 48
  Norse, 72
  Plato, 13
  Roman, 94, 101
  Spartan, 81
Aristotle, 13–14
Armor. *See* Weapons
Art and architecture
  Bronze Age, 15–16, 33
  Celtic, 17–18, 24
  Classical Age, 16, 48, 49*p*
  Crete, 29
  Etruscan, 37–38, 38*p*
  Greek, 5, 16–17, 48, 49*p*
  Loughcrew, Ireland, 9
  Minoans, 15–16, 29, 61–62, 103*t*
  Mycenaeans, 16, 103*t*
  Pompeii, 87
  Roman, 18–19, 35, 53–54, 67, 77–78, 95*p*
  Stone Age, 14–15, 32
  Viking, 73*p*
  See also Figurines; Frescoes; Housing; Paintings; Palaces; Pottery; Temples
Artemis, 91
Arthur (legendary king of Britain), 65*t*, 68
Artifacts, 114
Artisans
  Bronze Age, 15, 99
  defined, 114
  Etruscan, 38
  Greek, 47
  Minoan, 61–62
  Stone Age, 99
  See also Art andand architecture
Asgard, 90
Athena, 91
Athens
  citizenship, 100
  democracy, 48
  inventions, 102
  Peloponnesian wars, 80–83
  Persian wars, 83–84
  society and life, 34, 100
Atlantis, 65*t*
Attica, 81
Attila, 50
Augustulus, Romulus, 46, 46*t*, 75, 96
Augustus. *See* Octavian
Aurelius, Marcus, 80
Aurignacian culture, 32
Austria, burial sites, 9

B

Bacchus, 15*p*, 91
Barter, 3
Basque language, 56*m*, 57
Battles
  Marathon, 84*t*
  Plataea, 83–84, 84*t*
  Salamis, 82, 83–84, 84*t*
  Tanagra, 81
  See also Wars
Beowulf, 65*t*, 68, 73
Bibles, 27–28, 27*t*, 89*t*
Blanchard shelter, 20
Boats. *See* Ships
Bones, **oracle**, 3
Boudicca, 80
Brasidas, 81
Brigid, 67
Bronze Age, 10, 11–12
  agriculture, 33, 61
  art and architecture, 15–16, 33
  cultures, 33
  defined, 114
  society, 99
  technology and inventions, 106
  tools and weapons, 63, 103*t*, 108, 109
Bulgaria, Seutus' burial site, 7*t*
Burgundians, 44*m*
Burial sites, 9
  Celtic, 7*t*, 17, 25
  Etruscan, 37, 38, 38*p*
  Norse, 72
  Philip II, 7*t*
  Seutus III, 7*t*
  Sutton Hoo, 7*t*, 9, 72
  technology and inventions, 103*t*
  Tomb of the Triclinium, 38*p*
  See also Funerary objects
Byzantine Empire, xv, 49

C

Caesar, Julius, xv, 19–20, 95
  on Druids, 36
  Gallic wars, 42
  relationship with gods, 91
Cairn T, 9
Calendars, 2, 3, 9
Caligula, 80
Callias, Peace of, 84, 84*t*
Cardium Pottery culture, 33
Carthage, xv, 94–95
Cattle raids, 3, 25, 45
Cave paintings, 7*t*, 20–23, 21*p*
  function of, 14–15
  ice age, 51
  language and, 57*t*
  religious significance, 88
  technology and inventions, 103*t*
Celts, 23–25
  agriculture, 3, 24–25
  art and architecture, 17–18, 24
  burial sites, 7*t*, 9
  cultural map, 31*m*
  culture, 34
  Druids, 24, 36–37, 89
  ironworking, 12
  language, 23, 55, 56*m*, 57*t*
  life and society, 24–25
  migration, 24*m*
  religion and myths, 64, 67, 88–89
  rituals, 34, 36, 89
  technology and inventions, 103*t*, 104
  tools and weapons, 108–109, 110*p*
  writing, 59
Cemeteries. *See* Burial sites
Ceres, 2*p*
Chain mail, 103*t*, 104
Chariot, Roman, 109
Charlemagne, 41

Charles the Great. *See* Charlemagne
Chieftains
  Celtic, 24, 25
  Frank, 41
  Iron Age, 99
  Norse, 72
  Varangarian, 54
Childeric I, 41
Chinese calendar, 3
Chlodio, 41
Christ, Jesus. *See* Jesus Christ
Christian Bible. *See* New Testament
Christian **doctrine**. *See* **Doctrine**
Christianity
  Gaul, 42–43
  Justinian and, 53
  Kievan Rus, 54
  Latin, 60
  Rome, 26–28, 53, 78, 89*t*, 91–93
Cicero, 35
Citizenship, 100, 101
City-states
  Etruscan, 37, 40, 100
  Greek, xiv, 33, 34, 47, 48
    Peloponnesian wars, 80–83
    Persian wars, 83–85
  society and, 100
Civilizations, earliest, xiii–xv
Clactonian culture, 32
Classical Age (Greece), 16, 47–48, 49*p*
Classical antiquity, 4
Classical period, xiv, 5, 114
Clement I, 27*t*
Cleon, 81
Climate, xiii
Clinker boats, 73
Clothing
  Celtic, 25
  Etruscan, 38
  Germanic, 45
  Minoan, 62
Clovis (Frankish military leader), 41
Codex, 53, 94
Coloni, 97
Colonization, xiv, 73, 114
Columns, architectural, 17
Constantine, 49, 95
  Christianity and, 27*t*, 28, 93
Constantinople, 27*t*, 28, 49, 95
Copper, 63, 102*m*
Corinth, 81
Corinthian columns, 17
Coventina, 67
Crete, xiv, 28–29
  agriculture, 1, 11, 29, 61
  art and architecture, 29
  cultural map, 31*m*
  Knossos, 7*t*, 12, 29, 62*p*, 64
  metalworking, 101
  society, 99–100
  See also Minoans; Mycenaeans
Cro-Magnon peoples, 7*t*, 10–11, 29–30
  cave paintings, 21*p*
  society, 98
  tools, 103–104, 108
Croesus, 83
Cú Chulainn, 67
Cults, mystery, 91
Cultural history, 9, 113
Culture, **material**, 23, 43, 114
Culture and traditions, 30–35
  Bronze Age, 33–35
  cultural areas, 31*m*
  Stone Age, 31–33
  See also specific group/tribe; specific location
Cyclades, 15, 33
Cyrus the Great, 83, 84*t*

D
Danu, 67
Darius, 5–6, 82, 83, 84*t*
Deities
  agricultural, 2, 2*p*
  Bacchus, 15*p*, 91
  Celtic, 64, 67, 89
  depicted in art, 16, 38
  Etruscan, 38, 91, 100
  Germanic, 89–90
  Greek, 48, 65–66, 90–91
  Indo-European, 65, 88
  Minoan, 62
  mother, 89, 90, 91
  Mycenaean, 65
  Norse, 74, 90
  Roman, 66–67, 91
  See also Religion; specific god/goddess
Delian League, 80–81, 82, 84, 84*t*
Delphi **oracle**, 48, 90*p*
Demeter, 91
Democracy, 48, 100
Demosthenes, 81
Dentistry, Etruscan, 38
Dialogues (Plato), 13
Diana, 67
Digest of Justinian, 53
Diocletian, 26, 27*t*
Dionysus, 91
Doctrine
  Christian, 10, 28
  defined, 114
  religion and, 64
Doinysius mosaic, 15*p*
Domitian, 80
Dorians, xiv, 29, 47, 109
Doric columns, 17
Dragon's head, 73*p*
Druids, 24, 36–37, 89

E
Earls, 72
Earthquakes, 63
Eastern Orthodox Church, 27*t*, 53
Edict of Milan, 27*t*, 28, 89*t*, 93
Edict of Serdica, 93
Elements (Euclid), 107
England
  Lindow Moss, 7*t*
  Pax Britannia, 78
  Sutton Hoo burial site, 7*t*, 9, 72
Epics, 64, 67–68
  Beowulf, 65*t*, 68, 73
  Iliad, 57*t*, 58, 66*p*, 67, 112*p*
  Odyssey, 47, 57*t*, 58, 67
  timeline, 65*t*
  See also Myths; Sagas
Eras, 10
Eriksson, Leif, 68, 74*p*
Ertebolle culture, 33
Ethics (Aristotle), 14
Etruscans, xiv, 37–40
  agriculture, 38, 100
  art and architecture, 37–38, 38*p*
  burial sites, 9
  cultural map, 31*m*
  culture, 38, 94
  decline, 39–40, 94
  deities, 67, 91, 100
  government, 37, 40, 100
  language, 56, 56*m*, 57*t*
  origins, 37
  society, 100
  technology and inventions, 103*t*, 107
  See also Italy; Rome
Euclid, 107
Euric, 43
Euripidies, 65*t*
Evans, Arthur, 7*t*, 12, 29, 64
Extinction, ice age animals, 51

F
Farming. *See* Agriculture
Feudalism, 41
Figurines, **Stone Age**, 32, 32*p*
Fishing, **Mesolithic Period**, 32, 33
Flags, Viking, 74*p*
Flint tools, 32, 103
Forum, 95*p*
Forum Augustus, 18
France
  Lascaux cave paintings, 7*t*, 14, 20, 21*p*, 22
  Vix, 25
Franks, 40–41, 44*m*
  See also Gaul
Frescoes
  Iliad scenes, 66*p*
  Minoan, 62, 64
  Mycenaean, 16
Frey and Freya, 89
Frieze, 17
Funerary objects, 9
  Celtic, 25
  Mousterian, 32
  Neanderthal, 71
  See also Burial sites

G
Gallic wars, 42
Games

Etruscan, 38
Greek, 47
Minoan, 62
Gaul, 42–43, 50, 94
See also Franks
Gears, 107
Gender roles
agricultural, 3–4, 25
classical Greece, 100
Etruscan, 100
Iron Age, 99
Rome, 101
Stone Age, 98
Genetics, 30, 114
Geometric period (Greece), 16
Germanic groups, 43–46
agriculture, 3, 45
classification of, 43
cultural map, 31*m*
cultures, 44–45
language, xiii, 44, 55, 56*m*
life and society, 45
migration, 44*m*, 71
religion, 89–90
Rome and, 46, 46*t*, 80
writing, 58*p*, 59
See also Franks; Odoacer
Glaciation. *See* Ice ages
Glyphs, 55, 114
Gods and goddesses. *See* Deities
Golden Age (Greece). *See* Classical Age (Greece)
Gordian knot, 5
Gospels, Christian, 26, 27, 27*t*
Goths, 44*m*, 59
Government
Etruscan, 37, 40, 100
Frank, 41
Germanic groups, 45
Greek, 33–34, 100
Minoan, 99
Roman, 35, 77, 94, 95, 101
Gratian, 92
Grave goods. *See* Funerary objects
Graves. *See* Burial sites
Greece, xiv, 47–49
agriculture, 1, 4, 11
Archaic Age, 47–48
art and architecture, 5, 16–17, 48, 49*p*
city-states. *See* City-states
Classical Age, 48
cultural map, 31*m*
culture, 15*p*, 18, 33–34
Dark Age, 47
epics, 67–68
Hellenistic, 5, 6, 17, 48–49, 114
Heroic Age, 47
language, xiii, 5, 55, 59
myths, 65–66
Peloponnesian wars, 80–83
Persian wars, 83–85
religion, 48, 90–91
Roman conquest of, 49
slavery, 97
society, 100
technology and inventions, 107
weapons, 110
writing, 57*t*
See also Athens; Sparta
Gylippus, 81

H

Hadrian, 79
Hag's Chair, 9
Halloween, 34
Hallstatt period (Celtic), 12, 17, 24
Hannibal Barca, 43
Helen of Troy, 111
Hellenes, 5
Hellenistic age (Greece), 5, 6, 17, 48–49, 114
Hephaestus, 67
Hera, 66, 67, 90, 91
Herculaneum, Italy, 7*t*
Herodotus, 85
Heroic Age (Greece), 47
Heron of Alexandria, 103*t*, 107
Hesiod, 65*t*
Hierarchical, 114
Hieroglyphics, 57, 114
Hippocrates, 48
Historical inquiry, 10, 113
Historical research, 10, 113
Historical understanding, 10, 113
History, The (Herodotus), 85
Hjortspring boat, 73
Holidays, Celtic, 34
Homer, 47, 57*t*, 58, 68, 111
Homo Erectus, 30, 69
Homo Heidelbergensis, 69
Homo Sapiens, 7*t*, 29, 30, 69, 71
Hoplites, 82, 110
Housing
Celtic, 24–25, 34
Cro-Magnon, 30, 104
Etruscan, 37
Germanic, 45
Greek, 33
Minoan, 33, 62
Neanderthal, 70–71
Norsemen, 72
Roman, 35
Human remains. *See* Skeletal remains
Human sacrifice, 89
Humans, modern. *See* Homo Sapiens
Huns, 50
Hunter-gatherers, xiii, 1
agricultural permanence *vs.*, 11, 51
cave paintings, 15–16, 22–23
Cro-Magnon, 30, 98
ice age, 51
See also Fishing

I

Iberian language, 56*m*, 57
Ice ages, xiii, 7*t*, 51, 52*m*, 114
Iceland, sagas, 68–69
Iceman, 7*t*, 63
Iliad (Homer), 57*t*, 58, 66*p*, 67, 112*p*
Illyrian language, 55
Indo-Europeans, 33
deities, 65
language, xiii, 55–56, 56*m*, 57*t*
similarities among, 88
Inscriptions, 37, 56, 57*t*, 114
Institutes, 53
Inventions. *See* Technology and inventions
Ionic columns, 17
Ionic script, 57*t*
Ireland
archeological sites, 9
Celts. *See* Celts
Iron Age, 10, 11–12
agriculture, 3
defined, 114
society, 99
technology and inventions, 106
tools and weapons, 108–110
Ironworking, 7*t*, 12, 45, 102*m*, 103*t*, 106
Isis, 91
Issus, 5
Italy, xiv–xv
Etruscan civilization. *See* Etruscans
Iceman, 7*t*, 63
language, 55–56, 59
Mt. Vesuvius, 7*t*, 86, 86*p*, 87*p*
Odoacer, 46, 46*t*, 75–76, 96
Rome. *See* Rome

J

Jarls, 72
Jastorf culture, 44, 46*t*
Jerome, St., 27*t*, 28
Jerusalem, Jewish Second Temple, 89*t*
Jesus Christ, 26, 27*t*, 89*t*
See also Christianity
Juno, 67, 89*t*, 91
Jupiter, 67, 89*t*, 91
Justinian I, 53–54, 94, 95
Juvenal, 77

K

Karls, 72–73
Kievan Rus, 54–55
Knossos, 7*t*, 12, 29, 62*p*, 64

L

La Tene period (Celtic), 7*t*, 17, 24
Lamps, 104
Land ownership, 3
Language
evolution of, 57*t*
Indo-European, xiii, 55–56, 57*t*
linguistic groups, 56*m*
non-Indo-European, 56*m*, 56–57
spoken, 55
spread of Latin, 59
See also Writing; specific language
Lascaux cave (France), 7*t*, 12, 21*p*, 22
Latin, xiii, 55–56, 59–60

Laws
Justinian, 53
Kievan Rus, 54
Minoan, 29
Roman, 77, 94, 101
Scandinavian, 73
Legends. *See* Epics; Myths; Sagas
Leonidas, 84
Licinius, 93
Lindow man, 7*t*
Linear A script, 57–58, 57*t*
Linear B script, 57, 57*t*, 58
Linguists, 55, 88, 114
Livy, 35, 39
Logograms, 57, 114
Long Walls, 81, 83
Longboats, 73, 73*p*, 74–75
Loughcrew, 9
Lucretia, 39, 40*p*, 94
Lucumo, 39
Lunar calendars, 3
Lydia, 83, 84*t*
Lysander, 82

M
Macedonia, xiv, 4
Magdalenian cultures, 32
Magdalenian Period, 20
Maps
ancient Europe, xvi*m*
archeological sites, 8*m*
Celtic migrations, 24*m*
cultural areas, 31*m*
Germanic migrations, 44*m*
ice age peaks, 52*m*
linguistic groups, 56*m*
Neanderthal settlements, 70*m*
Norse paths, 72*m*
spread of technology, 102*m*
Marathon, Battle of, 84*t*
Mardonius, 84
Mars, 67, 91, 93
Material culture, 23, 43, 114
Mathematics, 107
Maximus, Magnus, 92
Megaliths, 3, 15, 36, 88, 114
Megara, 81
Melos, 81
Menelaus, 111
Merovich, 41
Merovingian dynasty, 41
Mesolithic Period. *See* **Stone Age**
Metallurgy, 63
Metalworking, 11–12, 29, 101
Metaphysics (Aristotle), 14
Middle Earth, 90
Military inventions, 107
Miltiades, 83
Minerva, 67, 91
Minoans, xiv, 7*t*
art and architecture, 15–16, 29, 61–62, 103*t*
cultural map, 31*m*
culture, 33, 64
disappearance, 62–64
government, 99
inventions, 106–107
law, 29
myths and legends, 64, 65
religion, 62, 65
society and life, 61–62, 99
tools and weapons, 108–109
writing, 29, 57, 57*t*
See also Crete
Minos, King, 65, 65*t*
Minotaur, 65
Mithras, 91
Mitylene, 81
Monarchies
defined, 115
Etruscan, 37
Greek, 5
Roman, 35, 93, 101
Mosaics, 15*p*
Mother goddesses. *See* Deities
Mount Vesuvius. *See* Mt. Vesuvius
Mousterian culture, 10, 32
Mt. Vesuvius, 7*t*, 86, 86*p*, 87*p*
Music, Etruscan, 38
Mycenaeans, xiv, 7*t*, 29, 47
art and architecture, 16, 103*t*
culture, 33, 99–100
myths, 65
tools and weapons, 109
writing, 57*t*
See also Crete
Mystery cults, 91
Myths, 64–65
archeological findings and, 12
Celtic, 25, 67
Greek, 65–66, 67
Minoan, 64, 65
Roman, 66–67, 91
timeline, 65*t*
See also Epics; Sagas

N
Neander Valley, Germany, 7*t*, 10, 11*p*, 69
Neanderthal peoples, 7*t*, 69–71
archeological findings, 10
Cro-Magnon compared with, 30
disappearance, 71
settlements, 70*m*
skull, 11*p*
tools, 30, 103, 103*t*
Neolithic Period. *See* **Stone Age**
Neolithic revolution, 115
Nepos, Julius, 75–76
New Testament, 27, 27*t*
Nibelungenlied, 65*t*
Nicias, Peace of, 81
Norsemen, 71–75
maps, 72*m*
oral traditions, 73
religion, 74, 90
sagas, 68–69, 73–74, 90
society and life, 72–74
Vikings, 73*p*, 74–75, 74*p*
writing, 59

O
Octavian, xv, 20, 77, 91, 95
Odin, 65, 89
Odoacer, 46, 46*t*, 75–76, 96
Odyssey (Homer), 47, 57*t*, 58, 67
Old Testament, 27–28, 27*t*, 89*t*
Oleg (Varangarian chieftain), 54
Oligarchy, 48, 100
Olympiad, 47
Olympias, 4
On the Soul (Aristotle), 14
Oracle
Alexander's visits to, 6
bones, 3
defined, 115
at Delphi, 48, 90*p*
Origen, 27
Orpheus, 91
Oscans, 86

P
Paddle-wheel ship, 103*t*
Paintings
cave. *See* Cave paintings
Etruscan, 38
Minoan, 62, 62*p*
Trojan horse, 112*p*
See also Cave paintings; Frescoes
Palaces
Bronze Age, 16
Minoan, 62, 103*t*, 106–107
Paleolithic Period. *See* **Stone Age**
Pantheon, 48, 74, 115
Parthenon, 48, 49*p*
Patriarchal cultures, 33, 101, 115
Patterns of continuity and change, 10, 113
Paul. *See* Saul of Tarsus
Pausanius, 84
Pax Augustus. *See Pax* Romana
Pax Britannia, 78
Pax Romana, xv, 18, 49, 77–80
Peace of Callias, 84, 84*t*
Peace of Nicias, 81
Peace of Rome. *See Pax* Romana
Peloponnesian Wars, 80–83
Pericles, 81
Periodization, 10, 113
Persian wars, 83–85, 84*t*
Petroglyphs, 15, 20, 115
Phalanx, 110
Philip II, xiv, 4–5, 7*t*
Phoenicians, 47, 57, 57*t*
Physics (Aristotle), 14
Pictograms, 57, 115
Pictographs, 55, 115
Pilate, Pontius, 26
Plataea, Battle of, 83–84, 84*t*
Plato, 13
Plumbing, 103*t*

Poetics (Aristotle), 14
Poetry, epic. *See* Epics
Polis. *See* City-states
Pompeii, 7*t*, 86–87, 86*p*
Poseidon, 66, 90
Potidaea, 81
Pottery, 11
  Bronze Age, 15–16
  Etruscan, 38
  Neolithic Period, 33
  wheel, 2, 102*m*, 105
Primitive, 115
Punic Wars, xv, 43, 95

Q
Quirinus, 91

R
Radio-carbon dating, 22, 113
Reliefs, 18, 23, 115
Religion, 88, 89*t*
  agriculture and, 2
  Celtic, 25, 36–37, 88–89
  Christianity. *See* Christianity
  Germanic, 89–90
  Greek, 48, 90–91
  Minoan, 62
  myths and, 64
  Norsemen, 74, 90
  Roman, 91
  See also Deities; Rituals
Remus, 66, 93
Republic, 77, 100, 101, 115
Rhea, 62
Rhetoric, 13, 115
Rituals
  agriculture and, 2
  art and, 15, 20
  Celtic, 34, 36, 89
  defined, 115
  Etruscan, 100
  Greek, 48
  religion and, 64
Roman Catholic Church, 27*t*
Roman chariot, 109
Roman Peace. *See Pax Romana*
Romance languages, xiii, 56
Rome, xiv–xv
  agriculture, 4
  art and architecture, 15*p*, 18–19, 35, 53–54, 67, 77–78, 95*p*
  Christianity and, 26–28, 53, 89*t*, 91–93
  conquest of Greece, 49
  cultural map, 31*m*
  culture, 34–35
  deities, 91
  empire
    fall of, 75, 76, 80, 95–96
    flourishing of, 77–80, 95
    origins, 95
    splits, 27*t*, 28, 49, 95
  epics, 68
  forum, 95*p*
  Germanic groups and, 46, 46*t*, 80
  government, 35, 77, 94, 95, 101
  invasions, 95–96
  language and writing, 59, 60
  laws, 53, 77, 94, 101
  myths, 66–67, 91
  origins, 93–94
  Pax Romana, xv, 18, 49, 77–80
  republic of, 94–95, 101
  slavery, 97, 101, 108
  society and social classes, 35, 77, 79–80, 94, 100–101
  technology and inventions, 103*t*, 106, 107–108
  tools and weapons, 110
  See also Etruscans; Gaul; Italy
Romulus, 66, 93
Roxane, 6
Runes, 55, 58*p*, 59
Rus, 54
Ruska Pravda, 54

S
Sagas, 64, 68–69, 73–74
  religion and, 90
  timeline, 65*t*
  See also Epics; Myths
Salamis, Battle of, 82, 83–84, 84*t*
Samhain, 34
Sami, 71
Sardis, 84*t*
Saul of Tarsus, 26, 27*t*
Saxons, 44*m*, 95
Scandinavia, 71
  See also Norsemen
Schliemann, Heinrich, 7*t*, 12, 111–112
Scripts, 57–58
  See also Writing
Semitic languages, 56, 56*m*
Sequana, 67
Serfdom, 97
Seutus III, burial site, 7*t*
Sextus Tarquinius. *See* Tarquinius Sextus
Ship burials, 7*t*, 9, 72
Ships
  Athenian, 102
  Norse, 73, 73*p*, 74*p*
  Roman, 103*t*
  See also Technology and inventions
Sicily, 81
Sidona, 67
Siegrfried, 65*t*
Skeletal remains
  Cro-Magnon, 7*t*
  earliest, xiii
  Iceman, 7*t*
  Mt. Vesuvius, 87*p*
  Neanderthal, 7*t*, 10, 11*p*, 69
Slavery, 97
  agriculture and, 4, 97
  Germanic groups, 45
  Greece, 97
  Rome, 97, 101, 108
  Scandinavians, 71, 73
Slavic languages, 54, 55, 57*t*
Slavic peoples, 54
Smelting, 12, 63, 106
Social history, 99, 113
Society and social classes
  agriculture and, 2–3, 24, 99, 100
  Bronze Age, 99
  early Crete and Greece, 99–100
  Etruscan, 100
  Iron Age, 99
  Norse, 72–73
  Roman, 35, 77, 79–80, 94, 100–101
  Sparta, 81
  Stone Age, 98–99
  urban, 99–101
Sophocles, 65*t*
Spain
  aqueducts, 105*p*
  cave paintings, 7*t*, 22
  languages, 57
Sparta
  military training, 34
  Peloponnesian wars, 80–83
  Persian wars, 83–84
Spears, 103*t*
Spoken language. *See* Language
Sports. *See* Games
St. Jerome, 27*t*, 28
Statius, 68
Statues, Etruscan, 37–38
Statuettes. *See* Figurines
Steam engine, 103*t*, 107
Stephen (deacon at Jerusalem church), 26, 27*t*
Stone Age
  archeological sites, 9
  art and architecture, 14–15, 32
  Mesolithic Period (Middle Stone Age), 1, 11
    agriculture and fishing, 32–33
    cultures, 32–33
    defined, 115
    society, 98
    technology and inventions, 104–105
  myths, 64–65
  Neolithic Period (New **Stone Age**), 1, 11
    agriculture, 33, 98–99, 105
    architecture, 15
    cultures, 33
    defined, 115
    pottery, 33
    society, 98–99
    technology and inventions, 101, 105–106
    tools, 108
  Paleolithic Period (**Old Stone Age**), 7*t*, 10–11
    art, 15, 32, 32*p*, 88
    cultures, 32
    technology and inventions, 103–104
    tools, 32
  society, 98–99
  stages of, 10

FILE NOT FOUND (CFIIV)

Civilizations of the Americas

THE ANCIENT WORLD

THE ANCIENT WORLD

CIVILIZATIONS OF THE AMERICAS

Volume 3

The Ancient World

Civilizations of the Americas

Volume 3

GENERAL EDITOR
Sarolta Takács, Ph.D.
Rutgers University

CONSULTING EDITOR
Eric Cline, Ph.D
The George Washington University

SHARPE REFERENCE
an imprint of M. E. Sharpe, Inc.

DEVELOPED, DESIGNED, AND PRODUCED BY DWJ BOOKS LLC
Principal Author: Karen H. Meyers

SHARPE REFERENCE

Sharpe Reference is an imprint of M.E. Sharpe, Inc.

M.E. Sharpe, Inc.
80 Business Park Drive
Armonk, NY 10504

© 2007 by M.E. Sharpe, Inc.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the copyright holders.

Library of Congress Cataloging-in-Publication Data
The ancient world / Sarolta Takács, general editor; Eric Cline, consulting editor.
p.cm.
Includes bibliographical references and index.
ISBN 978-0-7656-8082-2 (set : alk. paper)
1. Civilization, Ancient--Encyclopedias. 2. History, Ancient--Encyclopedias.
I. Takács, Sarolta A. II. Cline, Eric H.
CB311.A535 2007
930.103--dc22 2006101384

Printed and bound in Malaysia
The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials,
ANSI Z 39.48.1984

TI (c) 10 9 8 7 6 5 4 3 2 1

All images provided by Getty Images and the following:
background image: Ed Simpson/Stone
inset images (left to right): Bridgeman Art Library; Daniel Gotshall/Taxi; Bridgeman Art Library; Bridgeman Art Library

Contents

List of Illustrations vii

Topic Finder ix

Preface xi

The New World xiii

Map of Ancient Americas xviii

Adena 1

Agriculture 2

TURNING POINT: *The Domestication of Maize* 3

Anasazi 6

LINK TO PLACE: *Pueblos and Kivas* 8

Archeological Discoveries 9

LINK IN TIME: *Kennewick Man* 12

TURNING POINT: *Discovery of the Aztec Calendar* 13

Art and Architecture 14

Aztec Civilization 18

LINK TO PLACE: *Tenochtitlán* 19

GREAT LIVES: *Moctezuma II* 20

Beringia 23

Bison 24

Cahokia 25

LINK TO PLACE: *Stonehenge and Woodhenge* 26

Clovis 27

Culture and Traditions 29

LINK TO PLACE: *Chaco Canyon* 31

Great Serpent Mound 35

LINK IN TIME: *Poverty Point Earthworks (Louisiana)* 35

Hohokam 36

Hunter-Gatherers 38

Ice Age 39

Incan Civilization 40

LINK IN TIME: *The Quipu, An Incan Computer* 43

Language and Writing 45

LINK TO PLACE: *Rock Drawings and Petroglyphs in the Southwestern United States* 50

L'Anse aux Meadows 50

Machu Picchu 52

LINK IN TIME: *Machu Picchu Today* 53

Maize 54

Mammoths 56

Mayan Civilization 57

GREAT LIVES: *Pakal the Great* 59

TURNING POINT: *Mayan Astronomy* 60

Mississippian Cultures 61

Mound Builders 63

GREAT LIVES: *Frederick Ward Putnam* 65

Myths and Legends 66

LINK TO PLACE: *Trickster Stories in the Americas and Africa* 68

Nazca 70

Norton Tradition 71

Olmec Civilization 72

LINK IN TIME: *Earliest Known Writing Discovered* 73

Paleo-Indians 76

Potlatch 78

Religion 80

LINK TO PLACE: *Shamans in the Americas and Africa* 82

Slavery 85

Society 86

TURNING POINT: *Smallpox* 87

Taino 90

GREAT LIVES: *Bartolomeo de las Casas (1484–1566)* 91

Technology and Inventions 92

ANCIENT WEAPONS: *The Atlatl* 93

Teotihuacán (ca. 300 B.C.E.–C.E. 700) 95

Thule Tradition 97

Tiwanaku (200 B.C.E.–C.E. 1000) 98

Tobacco 98

LINK IN TIME: *Legacy of Ancient Ritual* 99

Toltec Culture 101

Tools and Weapons 103

ANCIENT WEAPONS: *Clovis Points* 103

ANCIENT WEAPONS: *The Self-Bow* 104

Totems 105

Vinland 107

GREAT LIVES: *Leif Eriksson* 107

Glossary 110

Selected Bibliography 113

Index 119

List of Illustrations

Time Lines

Ancient World Time Line Endpapers

Anasazi Culture, ca. 6000 B.C.E.–C.E. 1300 7

Archeological Discoveries 10

Aztec Civilization, C.E. 1000–1522 20

Clovis People, ca. 10,000 B.C.E.–8500 B.C.E 28

Hohokam Culture, 300 B.C.E.–C.E. 1450 37

Incan Civilization, ca. C.E. 1100–1572 42

Evolution of American Language and Writing 46

Mayan Civilization, 2600 B.C.E.–C.E. 1531 60

Religious Expression in the Ancient Americas 81

Maps

Ancient Americas, ca. C.E. 500 xviii

Major Archeological Sites of the Ancient Americas 11

Aztec Empire, ca. C.E. 1500 21

Major Cultural Areas of the Ancient Americas, ca. 2000 B.C.E.–C.E. 1500 30

Incan Empire, ca. C.E. 1500 41

Major Linguistic Groups of the Ancient Americas 47

Mayan Empire, ca. C.E. 900 58

The Mounds of Mississippian Culture 62

Migrations of the Paleo-Indians 77

Vinland, ca. 1000 B.C.E. 108

Photos

Incan deity 5

Cliff dwellings 8

Aztec stone calendar 9

Effigy pipe 15

Wall of skulls 19

Stone archway 32

Incan quipu 43

"Newspaper Rock" 49

Machu Picchu 52

Aztec Corn God 55

Mammoth 56

Temples in Chichén Itzá 59

Aerial view of burial mound 64

Creation myth 67

Colossal stone head 74

Image of Quetzalcoatl 83

Aztec atlatls 92

The Pyramid of the Sun 96

Toltec calendar 102

Anasazi spears 104

Haida totem pole 106

Topic Finder

Civilizations

Anasazi
Aztec Civilization
Clovis
Hohokam Culture
Incan Civilization
Mayan Civilization
Mississippian Civilization
Mound Builders
Norton Tradition
Olmec Civilization
Paleo-Indians
Thule Tradition
Toltec Culture

Culture and Language

Anasazi
Archeological Discoveries
Art and Architecture
Aztec Civilization
Culture and Traditions
Hohokam Culture
Incan Civilization
Language and Writing
Maize
Mayan Civilization
Mississippian Cultures
Mound Builders
Myths, Sagas, and Legends
Olmec Civilization
Paleo-Indians
Potlatch
Slavery
Society
Toltec Culture
Totems
Thule Tradition

General Topics

Agriculture
Archeological Discoveries
Art and Architecture
Culture and Traditions
Ice Age
Language and Writing
Mammoths
Myths, Sagas, and Legends
Norton Tradition
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

Notable Figures

Eriksson, Leif (*see* Vinland)
Moctezuma II (*see* Aztec Civilization)
Pakal the Great (*see* Mayan Civilization)
Putnam, Frederick Ward (*see* Mound Builders)

Places

Beringia
Clovis
Great Serpent Mound
L'Anse aux Meadows
Machu Picchu
Taino
Teotihuacán
Vinland

Periods and Events

Archeological Discoveries
Ice Age

Religion
Cahokia
Mound Builders
Religion
Totems

Society and Way of Life
Agriculture
Culture and Traditions
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

War and Military Affairs
Aztec Civilization
Incan Civilization
Norton Tradition
Tools and Weapons

Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality, have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

The New World

The "New World" is a phrase commonly applied to the Americas because Europeans became aware of the continents' existence only at the close of the fifteenth century C.E., a relatively recent point in human history. On the one hand, it is a troubled cliché; on the other hand, it is fitting from a broad historical perspective. North and South America together constituted a new frontier when the first Americans arrived on these continents some 12,000 or 13,000 years ago, or earlier. Likewise, the first European explorers in the Americas also found a new world: continents endowed with a cross section of the globe's geological and climatic characteristics supporting a myriad of distinct and unfamiliar societies.

Indeed, geography played a key role in the development of ancient American cultures. The earliest Americans, as they searched for a livelihood, benefited from the continents' sheer land mass and abundant natural resources. These same resources made the Americas attractive to European colonial powers. However, the isolation that allowed the earliest American societies to develop independently also left people vulnerable to diseases to which they had little or no immunity. Smallpox, a disease that claimed countless lives among the indigenous population, would prove to be the deadliest weapon in the arsenal of European explorers and settlers.

THE LANDS AND THEIR PEOPLES

North America, which includes modern-day Central America, the West Indies, the Caribbean Islands, and Greenland, is the third-largest continent, covering an area of about 9.1 million square miles (23.6 million sq km). It is bordered to the north by the Arctic Ocean, to the east by the Atlantic Ocean, and to the west by the Pacific Ocean. This vast expanse of land features widely varying terrain, from steep and rugged mountains to great stretches of flat prairie, and from arid and treeless deserts to thick swamps and dense rain forests. Such differences in climate and geography have helped determine the extent, and shape the nature of, the continent's many indigenous cultures.

The vast majority of North America's more than 500 million current inhabitants are descended from European immigrants who arrived within the past 400 years. European diseases such as smallpox, and conflict between European settlers and native peoples, devastated the indigenous population. As a result, indigenous peoples—Native Americans or Amerindians, Inuit, and Aleuts—make up only a small percentage of the current population. There are, however, a sizeable number of individuals of mixed European and indigenous descent, particularly in Central America.

South America is the world's fourth-largest continent, encompassing about 6.9 million square miles (17.9 million sq km). To the north, the Isthmus of Panama marks the land boundary between South America and North America. The Caribbean Sea forms the remainder of South America's northern border. The Atlantic and Pacific oceans bracket the continent to the east and west, respectively.

South America is roughly divided into three regions by its two main geographical features—the Andes Mountains and the Amazon rain forest. The Andes run north to south along the entire west coast of South America, forming a formidable barrier between the west coast and the rest of the continent. To the east of the Andes, dominating northern South America, is the world's largest rain forest. The Amazon rain forest covers some 2 million square miles (5.2 million sq km), or about 30 percent of the continent's total land area. To the south of the Amazon is a low, flat plain that comprises most of the modern nation of Argentina.

The great majority of South Americans are of European or mixed European and indigenous descent, and most claim Spanish or Portuguese ancestry. As in North America, the arrival of Europeans resulted in the decimation of local populations. However, the daunting physical barriers presented by the Andes and the Amazon protected many remote indigenous groups by isolating them from outside contact. As a result of geography, the indigenous population of South America today is significantly larger than that of North America (some 18 million people compared to roughly 4 million).

PREHISTORY

The influence of the land on its people predates recorded history. As a result of the last Ice Age, a land bridge known as Beringia connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 11,000 B.C.E., or perhaps even earlier, humans, called Paleo-Indians, in search of food, crossed from Asia into what is today Alaska and from there they moved further south through an exposed corridor within the ice sheet.

The early inhabitants found in North America a landscape still harshly cold and glaciated as the Ice Age waned. There were also some very imposing predators on the continent, enormous creatures that had yet to become extinct. These included the dire wolf, a huge ancestor of the modern wolf, which stood 5 feet (1.5 m) high, and the saber-toothed cat, which impaled its prey with two 7-inch (15-cm) teeth. As the Paleo-Indians traveled south, they stalked giant prey, such as the mammoth and mastodon, large hairy creatures related to the modern elephant.

Most modern knowledge of these earliest settlers of the Americas comes from archeological evidence of their hunting methods. The first tangible evidence of these newcomers are what seem to be spear points, called "Clovis points," named after the archeological site Clovis in New Mexico where they were first found. Similar finds have shown that humans had migrated throughout North, Central, and South America by around 10,000 B.C.E.

Dramatic climatic changes brought the Ice Age to an end, and Paleo-Indians, as a result, developed new means of subsistence. The large animals they once hunted died out, and smaller animals took their place. For example, the bison replaced the mammoth as the principal source of meat and hides for peoples living in North America. Archeological research reveals that the Folsom peoples of the Great Plains may have been specialists in hunting bison. Named for a site in New Mexico where their spearheads ("Folsom points") were first discovered, they appear to have been the first group to use hunting parties to surround their prey.

Eventually, the hunting and gathering lifestyle of the Paleo-Indians gave way to a more sedentary existence in areas where predictable sources of food could be cultivated. Maize or corn may have been domesticated as early as 10,000 B.C.E., and the potato, one of the first domesticated root crops, around 5,000 B.C.E. About 3,000 years ago, people living along the coast of what is now Peru dug irrigation channels to supply water to their fields. Systematic agriculture reached North America around 8,000 B.C.E. with the cultivation of beans, squash, and corn in what is today New Mexico. The earliest evidence of irrigation in North America, discovered in the same general area, dates to about 3,000 B.C.E. An examination of the spread of systematic farming and its impact on the evolution of ancient civilizations runs through many of the articles in this encyclopedia.

EARLY PEOPLES AND CIVILIZATIONS

The topography of the ancient Americas led to the development of region-specific societal structures. Nomadic cultures, such as the Clovis and Folsom peoples of North America, abounded in areas with wide plains and deserts. More sedentary societies, such as the great civilizations of the Maya and Aztec in Central America, flourished in fertile river valleys and coastal plains. Nomadic and sedentary societies met and influenced each other, resulting in certain parallels among native cultural practices and expression.

Woodland Groups

The heavily forested region of what is now the northeastern United States was home to many early North American cultures. These include the Adena of the Ohio Valley, who were the first Native Americans to build burial mounds and fortifications. Adena burial sites, some of which date to as early as 600 B.C.E., have yielded ornate funerary objects such as copper plates and ceramics as well as metal jewelry, shells, and pearls. The Hopewell people, who succeeded the Adena as the dominant society in the region, continued many Adena burial techniques. While the Adena had been nomadic hunters who settled in temporary camps, the Hopewell resided in more permanent villages and began to cultivate crops.

Mississippian Cultures

Around C.E. 500, Mississippian tribes, known as Mound Builders for the large earth mounds they built as tombs, supplanted the Hopewell. By this time, maize cultivation was the primary agricultural practice in the region. This nutritious and reliable crop allowed larger centers of population to develop. One of the cities of the Mound Building culture, Cahokia, in what is now Illinois, may have had as many as 20,000 inhabitants in the early twelfth century C.E. Cahokia also boasts the largest of the known temple mounds, which rises almost 100 feet (30 m) and extends over a length of almost 1,000 feet (305 m). The Temple Mound culture also elaborated on the funerary offerings of the Adena and Hopewell before them, and their graves contain sophisticated copper works such as ornate ceremonial axes.

Anasazi

In the southwestern area of North America, the Anasazi also developed large permanent settlements because of advancements in agriculture and grain storage. The Anasazi built apartment-like structures called pueblos out of adobe along the sides of cliffs around C.E. 900, and they farmed in the river valleys beneath their dwellings. The relative inaccessibility of their cliff-side homes protected them from possible attack by nomadic peoples.

Olmec

The Olmec created the most influential early civilization in central Mexico, flourishing from roughly 1500 until 400 B.C.E. Many aspects of Olmec culture were adapted by later Central American cultures such as the Maya and Aztec. These included the construction of stepped pyramids and the worship of deities such as the jaguar god. Later, the Aztec adopted the Olmec god Quetzalcoatl, a plumed serpent, as one of their principal deities.

The social structure of the Olmec seems to have been **stratified** into peasant and noble groups. In order to maintain an agriculturally based society, and to construct monumental structures such as temples and pyramids, this stratified social structure must have been administered with some efficiency.

Maya

The Maya were the most prominent Mesoamerican, or Central American, civilization. The earliest evidence of Mayan culture comes from the Yucatan Peninsula of southern Mexico and dates to around 2600 B.C.E. At the height of their power, in about C.E. 250, the Maya controlled an area that now encompasses southern Mexico, Guatemala, western Honduras, El Salvador, and northern Belize.

The Maya created a highly sophisticated and literate society marked by advancements such as a hieroglyphic writing system and a knowledge of astronomy extensive enough to allow compilation of an elaborate calendar. Like the Olmec, the Maya were pyramid builders. The Maya maintained communication within their realm via an extensive trade network, facilitated by roads built through the jungle.

Toltec

Much territory that had once been Mayan was overtaken by the Toltec culture from the tenth to twelfth centuries C.E. The Toltec formed a large empire ruled from the city of Tula in northern Mexico. Art and architecture discovered in Tula and other Toltec cities is reminiscent of earlier cultures such as that of the Olmec. Toltec art and public works were so admired by the later Aztec cultures that many Aztec claimed Toltec descent; in fact, the very word *toltec* became synonymous with "cultured" or "skilled."

THE LAST EMPIRES

The Aztec and Incan empires were the last great civilizations to arise in the Americas prior to the arrival of Europeans in the late fifteenth century C.E. Both empires developed complex agricultural and administrative structures, which allowed them to rule vast territories and amass great wealth and power. The Aztec and the Inca would be the unchallenged masters of their regions until European forces conquered them in the early 1500s.

Aztec

Aztec cultural roots can be traced to northern Mexico around C.E. 1100. By the fifteenth century C.E., the group had migrated south to central Mexico and founded an empire centered around the great city

of Tenochtitlán (the site of present-day Mexico City). Aztec culture was stratified, like that of the Olmec before them, and capable of producing grand public works like those of the Maya and Toltec. Tenochtitlán itself was a wonder of early urban development, built upon a series of artificial islands in Lake Texcoco. The Aztec dredged the surrounding swamplands and constructed floating gardens upon which they cultivated a variety of crops. The visual effect was so striking that the Spanish troops who conquered the Aztec referred to Tenochtitlán as "the Venice of the New World."

Inca

At about the same time that the Aztec dominated Central America, the Inca were establishing the largest empire in South America. Around C.E. 1100, the Inca began to expand from their homeland in the Andean region of modern-day Ecuador and Peru. The empire they founded eventually stretched from Ecuador to Chile and from the Andes to the western coast of South America. Like the Aztec, the Inca were a sophisticated people; for example, they employed innovative technologies to create terraces on the steep slopes of the Andes in order to exploit as much arable land as possible. The Inca, too, built large urban centers and connected them with a network of roads that stretched the length of the empire.

EXCHANGE AND ENCOUNTER

For more than 10,000 years, the descendants of the Paleo-Indians were the only inhabitants of the Americas; the continents were unknown to the rest of the world. The first Europeans to come upon this "New World" were Norsemen who had settled Greenland in C.E. 985. Around C.E. 1000, Leif Eriksson traveled from Greenland to what is today Newfoundland, Canada. He and some of his relatives made several unsuccessful attempts to create a permanent settlement in North America, but their discovery was soon forgotten. Europeans "rediscovered" the Americas in 1492, when Christopher Columbus encountered the Caribbean island of Hispaniola while searching for a westward route to India. Scholars estimate that perhaps as many as 40 million people lived in the Americas at the time of Columbus's arrival.

The European discovery of the Americas ended the continents' isolation from the wider world and touched off a steep decline in the indigenous population. European interest in the Americas focused on seizing natural resources—especially precious metals such as gold and silver—before other countries could do so. In the Caribbean and South and Central America, Spanish explorers and conquistadors laid waste to the existing societies. Within 20 years of Columbus's arrival, the Spanish had colonized most of the Caribbean and established a settlement on the mainland in Panama.

The pace of exploration accelerated following the fall of the Aztec Empire in 1521 to a small force of Spaniards led by Hernán Cortés, supported by indigenous enemies of the Aztec. The enormous amount of gold and silver seized by Cortés raised the promise of more great riches to come and led European monarchs to redouble their exploration efforts. Francisco Pizarro's conquest of the Incan Empire between 1532 and 1534 further stoked the fires of European exploration in the Americas.

By contrast, the European conquest of North America was a more gradual and less spectacular process. No gold or silver awaited the first explorers; the first colonies were unsuccessful, and in many cases European settlers depended for their survival upon help from the native population. Despite the lack of precious metals, valuable natural resources such as sugar, tobacco, indigo, furs, and timber attracted more settlers. By the mid-seventeenth century C.E., a host of European nations, including Spain, Portugal, England, France, and Holland, had established colonies in the Americas, often driving native peoples off the land. With the founding of permanent European colonies, the demise of the indigenous peoples was at hand. Within a few generations, disease and conflict would kill some 90 percent of the native population.

CONNECTIONS TO TODAY

The European discovery of the Americas served notice that the geographical isolation that had shaped the development of ancient indigenous American cultures was coming to an end. The invention of faster and more efficient means of transportation allowed ever greater numbers of immigrants to

flock to the Americas from increasingly more remote places. By the early twentieth century C.E., the ocean crossing that took Columbus months to achieve was reduced to only a few days. The advent of air travel would cut the time to mere hours. The Americas, which once represented a "New World" to so many, now exist in an increasingly connected world in which global transportation and communication provide access to even the remotest locations on the planet.

FURTHER READING

Adams, Richard E.W. *Prehistoric Mesoamerica*. Norman: University of Oklahoma Press, 2005.

McCarmack, Robert M., and Gary H. Gossen. *The Legacy of Mesoamerica: History and Culture of a Native American Civilization*. New York: Prentice Hall, 2nd ed., 2006.

Nies, Judith. *Native American History: A Chronolgy of the Culture's Vast Achievements and Their Links to World Events*. New York: Ballentine, 1995.

Saunders, Nicholas J. *Ancient Americas: The Great Civilizations*. Gloucestershire, UK: Sutton, 2005.

Thomas, David Hu. *Exploring Ancient Native America*. London: Routledge, 1999.

Sarolta A. Takács, Ph.D.
General Editor

Map of Ancient Americas

ANCIENT AMERICAS, CA. C.E. 500

If, as many historians and archeologists now suppose, humans first crossed into the Americas from Siberia across a land bridge about 13,000 B.C.E., it seems amazing that by 8000 B.C.E. they had traveled thousands of miles to settle the entire landmass of North and South America. The most sophisticated civilizations—those of the Maya, Aztec, and Inca—emerged in Mexico and Central and South America. Once Europeans began to colonize the Americas in the sixteenth century C.E., however, most of the indigenous people were wiped out within 300 years.

A

Adena

A group of prehistoric Native Americans who lived in what is now Ohio, Indiana, West Virginia, Kentucky, Pennsylvania, and New York from about 1000 B.C.E. to C.E. 100. Because members of the Adena culture left no written records and very little evidence of their day-to-day life, nearly everything we know about these people has been gleaned from thousands of earthen burial sites, or mounds, that they constructed throughout the eastern half of what is now the United States.

In C.E. 1901, **archeologist** William Mills unearthed the first **artifacts** from the Adena culture on the estate of Ohio governor Thomas Worthington. Mills discovered a siltstone pipe fashioned to resemble a human and named it after the estate, which was called Adena. Later, the name was assigned to the people who had created the pipe and built the mounds. Many such pipes have since been unearthed; they are considered to be particularly fine examples of prehistoric Native American art.

The Adena did not live near the burial mounds that they built, which were probably regarded as sacred, and only three Adena settlements have been found to date. It is possible that European settlers destroyed the remains of villages as they cleared and plowed the land. The mounds themselves, then, are all that is left of Adena culture.

The burial mounds of the Adena varied greatly in size. The largest cone-shaped mound of any mound building culture is the Grave Creek Mound, constructed by the Adena and located in Moundsville, West Virginia. Grave Creek Mound is 62 feet (19 m) high and 240 feet (73 m) in diameter, was built over a period of more than 100 years, and holds the remains of many people. The Adena built the Grave Creek mound by moving more than 60,000 tons of earth in small basketloads, an immense effort that must have involved nearly everyone in the community.

Archeologists believe that **political history** of the Adena involved evolution from an **egalitarian** society to a complex, **stratified** society over time. Early burial mounds do not betray marked differences in how people were buried, but over time there came to be significant differences between the graves and grave goods of ordinary people and those of the elite. It appears that the remains of common people were cremated and that chiefs, elders, and **shamans** were buried in log tombs that were covered with earth. Bodies were interred along with flints, beads, pipes, and other ornaments.

The Adena were primarily hunter-gatherers who moved from place to place in small family groups in pursuit of food. They did not live in permanent

settlements but evidently gathered together periodically to bury the dead and engage in a variety of religious rituals. These occasional meetings probably helped bind members of the culture together. The Adena did not practice intensive agriculture but may have grown a few plants in small gardens.

No one knows what happened to the Adena; either they died out or they were absorbed into other cultures. The Hopewell culture (100 B.C.E.–C.E. 500), which lived in the same general area as the Adena and built similar burial mounds, is often cited as a continuation of the Adena culture.

See also: Archeological Discoveries; Art and Architecture; Hunter-Gatherers; Mound Builders; Religion.

FURTHER READING

Roza, Greg. *The Adena, Hopewell, and Fort Ancient of Ohio*. New York: PowerKids Press, 2005.

Agriculture

The roots of farming and raising animals for food among ancient Native Americans can be traced to the second or third millennium B.C.E., with the domestication of wild grasses and cereals. Although many Native American culture groups never adopted a settled agricultural way of life, continuing to live by hunting and gathering until well after European colonization, many other cultures changed once people developed the ability to grow a surplus of food. These more advanced societies include the Hopewell and Mississippi cultures in North America, and Mayan, Incan, and Aztec civilizations in Central and South America.

NORTH AMERICA

For many years, historians believed that there were only three places in the world where plants were originally domesticated: the Near East, China, and **Mesoamerica**. From these three areas, it was believed, domesticated plants were carried around the world.

Recent research, however, suggests that there was a fourth major center of plant domestication: eastern North America. "In fact," according to anthropologist Ruth Selig in "A Quiet Revolution" (1998), "eastern North America provides the clearest record available of agricultural origins anywhere in the world." Plants such as chenopod, marsh elder, sunflower, erect knotweed, little barley, and maygrass were domesticated in North America by 2000 B.C.E., long before the appearance of more well-known crops such as corn, beans, and squash in Mesoamerica. The seeds of these first domesticated plants could be boiled and eaten as cereal, ground into flour, or eaten raw.

Like many other domesticated plants, these early varieties began as wild plants that grew along the floodplains of rivers. Over time, people began to harvest the seeds and replant them the following year. From about 250 B.C.E. to about C.E. 200, people of the Hopewell culture lived in small settlements in river valleys along the Mississippi River and planted these crops in small plots, using only stone and wooden tools. A field of only 200 square feet (19 sq. m) planted with marsh elder and chenopod could easily be harvested by a family of five in about a week and would have yielded enough to feed a family of 10 for six months.

Cultivation of Maize

Although maize arrived in North America from Mexico in about C.E. 200, North American farmers did not grow much of it until about C.E. 800. No one is sure why it took so long for the crop to become as popular in North America as it was in Central and South America, but there is some evidence that maize was originally reserved for religious and ceremonial use. Some cultures, for example, that did

TURNING POINT

The Domestication of Maize

Maize, or, as Americans typically call it, corn, was first domesticated in **Mesoamerica** thousands of years ago. It is an extremely valuable food crop because it is easy to plant, hardy, yields plenty of grain, and has a growing cycle that takes advantage of spring rains. Maize also provides excellent nutrition and, along with beans and squash, provides all the amino acids that humans need to sustain life. Moreover, corn can be dried and preserved, allowing a human population to survive during years with poor harvests.

While the domestication of many plant species was a simple matter of collecting and planting seeds, the domestication of maize was a long, difficult, and tricky process. Maize never existed in the wild, and it must be sown and cared for by people. The origin of maize is unknown, but most researchers believe that maize resulted from domestication of a Mexican plant, teosinte, or *Zia mays*. Teosinte yields kernels that can be popped, much like corn, and modern scientists have been able to demonstrate that it can be mutated into corn in only two steps. Some researchers believe that maize is a direct descendant of teosinte; others believe that it is a hybrid.

It remains a mystery why anyone ever thought of trying to cultivate teosinte, since its grains are small and individual, not multiple and attached to cobs as is the case with modern corn. The earliest cobs were only a few inches long and had only eight rows of kernels. It took several thousand years for the evolution of the modern grain, which occurred only because of systematic human intervention.

not eat corn instead buried it with individuals of high social status.

From C.E. 800 to C.E. 1100, a Native American culture known as the Mississippian arose and dominated most of North America east of the Mississippi River Valley. Mississippians quickly came to rely on maize as their primary food crop. As food surpluses grew, Mississippians built fortified towns and developed a complex social structure. This is evidenced by their burial mounds, which reveal sharp distinctions in social class. Most lower-status people were cremated, while higher-status people were buried along with luxury objects, such as jewelry. Farming took place outside the boundaries of the towns.

Land Ownership

Native Americans had two systems of land ownership. In one system, a village or cultural group owned the land while individual women controlled their own fields. As long as a woman continued to farm a field, it was hers for planting. But if she stopped using the land, someone else could take it over or it would be returned to the village for reallocation. This system of ownership occurred in **matrilineal** societies—that is, societies in which families were traced through their relationship to the mother, rather than to the father.

The second system of land ownership prevailed in the southwestern parts of what is now the United States. There, individuals could own land and pass it down from father to son or mother to daughter. Nevertheless, Native Americans did not conceive of ownership in the same way that Europeans did; they saw themselves less as owners than as guardians of the land, holding it in trust for the next generation.

Agricultural Methods

Typically, Native American farmers grew their crops in river valleys and flood plains, where the soil could be easily worked with stone and bone implements. They used fire to burn weeds and the remains of the prior year's crop, which added important minerals to the soil. Many culture groups developed unique methods of preserving seeds and plants from birds and insects. The Mohawk soaked seeds in water

mixed with hellebore, a toxic root. The Navajo sprinkled urine mixed with goat's milk on squash plants to prevent damage by chinch bugs.

Although most native North Americans planted their fields near sources of water, farmers in the arid southwest needed an artificial method of irrigating their fields. The Hohokam people built the most extensive network of canals in ancient North America along the Salt, Gila, and Verde Rivers in Arizona. The longest of the canals carried water more than 16 miles (26 km). In all they built more than 600 miles (965 km) of canals without the use of beasts of burden or metal implements.

In many tribes, farm labor was the province of women, although men did the heavy work of clearing the fields. Then women planted the seeds and harvested the crop, using simple tools of wood and stone, as well as baskets for storing and winnowing grain.

By C.E. 1000, most native groups across North America relied on a trio of domesticated plants that came to be known as the "three sisters": maize, beans, and squash. Native Americans developed an efficient method of growing their three primary crops. A typical field consisted of mounds of well-tilled earth—sometimes in rows, sometimes randomly placed. Corn was planted in the center of each mound, and beans were planted near the corn so that their climbing vines could be supported by the corn stalk. Farmers planted squash between the mounds. The three plants not only thrived together in the field, but also complemented one another nutritionally, providing a diet high in fiber and important nutrients.

MESOAMERICAN FARMING

The major civilizations of Mesoamerica, the Maya and the Aztec, each developed agricultural methods and crops that were suited to the geography of the regions in which they lived. The Maya farmed in tropical rain forests in what is now Belize, no easy task, and some Aztecs actually grew crops on floating islands in a lake in Central Mexico.

Mayan Methods

The Maya created one of the ancient world's greatest civilizations in the tropical rain forest of Central America, a part of the world that is not conducive to intensive agriculture. The geographic challenges they faced forced them to adopt a variety of techniques to grow enough crops to sustain a significant population.

To deal with the dense vegetation and poor soil of the rain forest, the Maya employed a farming method known as "slash and burn," or swidden, to enrich the soil prior to planting. Swidden begins by chopping down as many large trees as possible and allowing the felled trees to dry out. When the trees are sufficiently dry, the entire area is set alight. The resulting fire clears out underbrush, and the layer of ash it produces fertilizes the soil.

In areas where there was insufficient water, the Maya built irrigation canals. In swampy areas, the Maya dug up soil and shaped it into mounds on which they planted seeds. The excavated ditches gathered water that could be used for irrigation. After two to five growing seasons, fields were left fallow for as many as ten years. The Maya used these diverse methods of cultivation to grow maize, beans, chilies, squash, tomatoes, avocados, pumpkins, and cacao.

Aztec Methods

The Aztec, like the Maya, created a great ancient civilization in central Mexico. Their capital city of Tenochtitlán was built on an island in the middle of Lake Texcoco. To produce enough food for their growing population, the Aztec used a farming system known as *chinampas,* or "floating gardens." Aztec laborers dredged soil from the lake bottom and built a series of rectangular fields on which they grew food. This method overcame the major problems with growing food in the Valley of Mexico in south central Mexico: poor soil and variable rainfall. Surrounded by water and dredged from the rich soil at the bottom of the lake, the chinampas, although labor intensive, had high yields.

Like the Maya, the Aztec grew maize, beans, squash, and chilies and they, too, used the slash-and-burn method. They planted corn and beans in the same four- to- five-inch-deep hole, so the corn served as a support for the beans.

An Incan deity carved in the sixteenth century C.E. shows the importance of agriculture to ancient Incan society. The pottery figure wears a headdress that depicts the moon. In its arms and lap it holds corn and squash, two staple crops of the Inca. (The Bridgeman Art Library/ Getty Images)

Incan Methods

The Inca, a great civilization of South America, used very sophisticated farming techniques compared to other, contemporary cultures. Because rainfall was unpredictable in the vast lands of the Inca, their engineers built complex drainage and irrigation systems and terraced steep hillsides so crops could be grown. The Inca used a nitrate-rich fertilizer called guano, the droppings of seabirds and bats, to increase the yields of their crops.

The Inca grew a variety of plants that did well in diverse habitats and were, consequently, able to feed a population of 15 million people while amassing a three- to seven-year food surplus. They accomplished this without large beasts of burden to plow the fields. Several very common foods were first cultivated by the Inca, including potatoes, lima beans, and tomatoes. The Inca grew 20 varieties of corn and 240 varieties of potato. They even made a potato flour by freeze-drying potatoes. They also grew squash, beans, cassava, quinoa, peanuts, and peppers.

Following European contact, the crops of the Americas spread to rest of the world. Potatoes, unknown outside of the Americas before C.E. 1500, subsequently became a staple crop throughout Europe. Tobacco, indigo (for dyes), and sugarcane, all native to the Americas, became vital sources of export revenue for European colonists. Ironically, the same colonists would eventually annihilate many of the local cultures that first domesticated those crops.

See also: Anasazi; Aztec Civilization; Cahokia; Hohokam Culture; Hunter- Gatherers; Incan Civilization; Maize; Mayan Civilization; Mississippian Cultures; Technology and Inventions; Tools and Weapons.

FURTHER READING

Berry, Wendell. *Enduring Seeds: Native American Agriculture and Wild Plant Conservation*. Tucson: University of Arizona Press, 2002.

Hatch, L. Upton, and Marylin E. Swisher, eds. *Managed Ecosystems: The Mesoamerican Experience*. London: Oxford University Press, 1999.

Selig, Ruth, and Bruce D. Smith. "A Quiet Revolution: Origins of Agriculture in Eastern North America." In *Anthropology Explored: The Best of Smithsonian AnthroNotes,* edited by Ruth Selig and Marilyn R. London. Washington, DC: Smithsonian Institution Press, 1998.

Woods, Michael B., and Mary B. Woods. *Ancient Agriculture*. Minneapolis, MN: Runestone Press, 2000.

Anasazi

Native American people who lived in the Four Corners Area, where modern-day Colorado, Arizona, New Mexico, and Utah meet, from about 1200 B.C.E. to about C.E. 1300. The term *anasazi* is used by **archeologists** to designate a people with a distinctive culture, the probable ancestors of the Hopi and Zuni peoples of the Southwest.

Anasazi is a Navajo term that translates loosely as "enemy ancestors" or "people not like us." It seems likely that the Anasazi referred to themselves, as many tribes do, simply as "the people," but their language has been lost. Some scholars believe the Hopi word for ancestors, *Hisatsinom,* should be used to refer to the Anasazi. However, other descendants of the Anasazi, such as the Zuni, have different words for ancestors. Thus, most archeologists continue to use the term Anasazi.

HISTORY

The history of the Anasazi has been divided into several stages. The first, called Basketmaker I, refers to the earliest ancestors of the Anasazi, a nomadic desert people whose beginnings have been traced as far back as 6000 B.C.E. The second period, Basketmaker II, refers to the time from about 1200 B.C.E until about C.E. 500 C.E., when the Anasazi learned how to make pottery. Before that, they were a nomadic people who lived by hunting and gathering, and the lightweight baskets they made were ideal for storing and transporting food. Pitch-lined baskets could even hold water.

During the Basketmaker III Period, from C.E. 500 to 700, the Anasazi learned how to cultivate food crops, such as corn, beans, and squash. This allowed them to stay in one place for longer periods of time, which, in turn, led them to build more permanent homes and to begin to make pottery to hold surplus food and for cooking. Anasazi pottery was brightly colored, with red, orange, black, and white geometric designs.

Anasazi homes, called pithouses, were constructed by digging into the earth and hollowing out a square three to five feet (0.9 m to 1.5 m) deep. Over this, they constructed walls of dirt and a roof of logs that slanted upward, ending in a hole at the top. In the center of the structure was a hearth, and smoke escaped through the central hole in the roof. The Anasazi typically stored their food in nearby caves.

During the Pueblo I Period (C.E. 700 to 900), the Anasazi began to build above-ground multilevel homes, called pueblos by the Spanish, that were something like apartment buildings. The walls were made of stone and mortar, and the roofs were made of logs, which were then covered with mud. People moved from one level to another using ladders.

ANASAZI CULTURE, CA. 6000 B.C.E.–C.E. 1300

ca. 6000 B.C.E. Beginning of first stage of Anasazi culture, known as Basketmaker I, during which time the Anasaszi were a nomadic people

ca. 1200 B.C.E.–C.E. 500 Second stage of Anasazi culture, known as Basketmaker II, during which time the Anasazi learned to make the pottery for which they are known today

ca. C.E. 500–700 Basketmaker III stage, during which the Anasazi learn to cultivate food crops and begin to establish permanent settlements

ca. C.E. 700 Anasazi begin to build elaborate masonry houses

ca. C.E. 700–900 During this time, known as the Pueblo I Period, Anasazi begin to build multilevel houses

ca. C.E. 1150–1300 Pueblo II Period, during which time Anasazi begin to use the bow and arrow for hunting

ca. C.E. 1200 Anasazi begin to build safer settlements in more remote locations, indicating that they may have been involved in warfare

ca. C.E. 1300 Anasazi suddenly disappear; no one knows what happened to them

During the Pueblo II Period, between C.E. 1150 and 1300, the Anasazi began to use the bow and arrow instead of the spear and *atlatl* for hunting (an atlatl is a device that provides leverage and allows a spear to be thrown a greater distance). As a result, the Anasazi population increased significantly and began to disperse throughout the Southwest. At this time, the Anasazi began to build huge structures that sometimes housed hundreds of people.

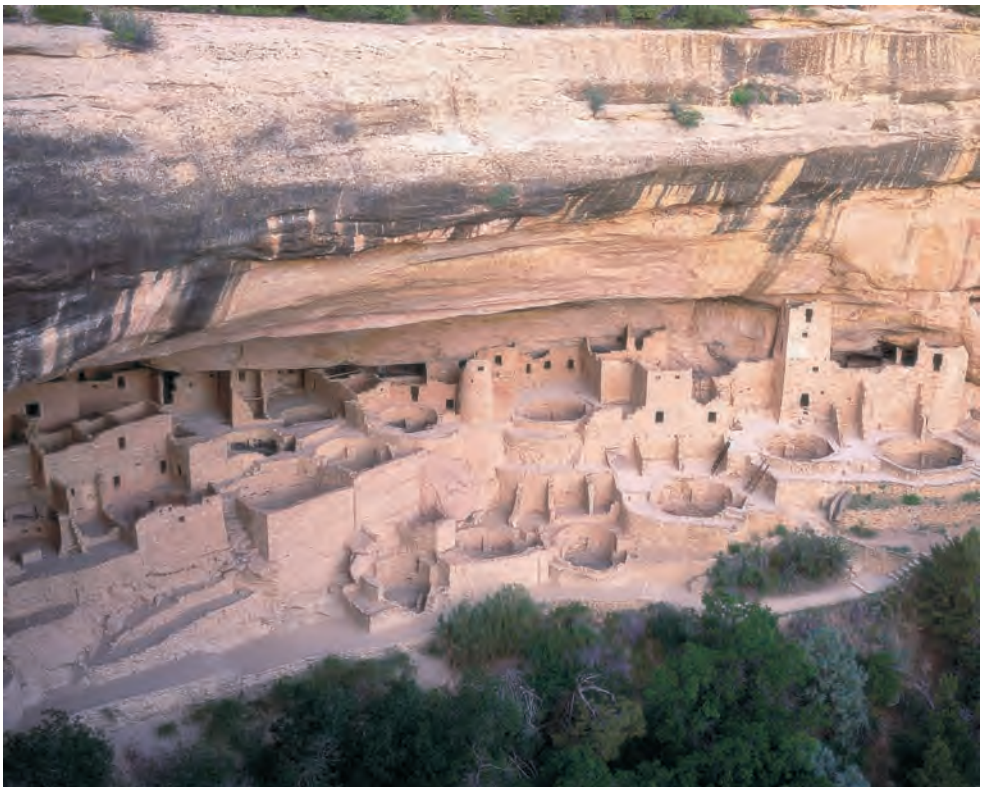
During the Pueblo III Period, from C.E. 1100 to 1300, the Anasazi began to build sprawling cities under the overhangs of immense cliffs. Thus, the Anasazi sometimes are referred to as cliff dwellers. One of the major centers of this period was at Chaco Canyon in New Mexico. Among the massive pueblos there is the five-story Pueblo Bonita, which could house more than 800 people. From their center in Chaco Canyon, the Anasazis built more than 300 miles (483 km) of roads connecting outlying villages with this cultural and religious center. The Great North Road stretches more than 12 miles (19 km), in a precise north-south direction. **Artifacts**, such as seashells, indicate that the Anasazi had a wide trading network.

In addition to Chaco Canyon, major Anasazi cities include Mesa Verde in southwestern Colorado and the nearby "Aztec" ruins, so named because the Spanish did not believe Native Americans capable of building such structures. Hovenweep National Monument on the Utah-Colorado border has six Anasazi sites, but Yellow Jacket in Colorado is the largest Anasazi town yet discovered. The pueblo there had 1,800 rooms housing more than 3,000 people. Many of these cliff settlements are accessible only by rope or rock climbing.

DEMISE

Beginning in about C.E. 1200, the Anasazi began to build their homes in locations chosen for safety, indicating that they may have been involved in warfare. Then, suddenly, in about C.E. 1300, the Anasazi seem to have disappeared. No one is sure what happened, but the great cities were abandoned.

Because the exodus from the cities was so sudden and complete, many scientists believe that environmental conditions such as droughts may have been a factor. Others believe that religion created the "pull" that drew the Anasazi to leave their cities and migrate across the Southwest, ultimately intermingling with the Hopi, Zuni, and other culture groups. According to one theory, changes in rainfall patterns led the Anasazi to question the effectiveness of their rain dances and, thus, the power of their gods and religion. It



This photo shows the ruins of Cliff Palace, located in Mesa Verde National Park in Colorado. Cliff Palace is the largest cliff dwelling in North America, built by the Anasazi between C.E. 1190 and 1260 and containing more than 150 rooms, including 23 kivas. (Demetrio Carrasco/Dorling Kindersley/Getty Images)

suggests that the Anasazi may have left their old settlements to find new gods that could help them ensure plentiful crops. As evidence of a change in religion, archeologists note that the Anasazi stopped building tower *kivas,* indicating that perhaps they no longer worshipped the deities they had previously worshipped.

See also: Agriculture; Archeological Discoveries; Hunter-Gatherers; Religion.

LINK TO PLACE

Pueblos and Kivas

Beginning about C.E. 700, the Anasazi people began to build elaborate masonry homes that the Spanish called *pueblos.* Pueblo is the Spanish world for "village," referring to a distinctive style of architecture that arose among Native American groups of the Southwest. The probable descendents of the Anasazi are still called Pueblo Indians.

The typical home in a pueblo was a flat-roofed building made of adobe. The homes comprised rectangular rooms that adjoined one another, with separate areas for storage and for ceremonies. The ceremonial areas, called *kivas,* were usually round and underground. Eventually, the Anasazi began to build up, developing apartment-like structures. Their towns appear to have been planned in advance and very carefully laid out. During this period, kivas were 40 to 70 feet in diameter (12.19 to 21.324 m) and some were built above ground. Some kivas were built in the shape of towers, and some were shaped like keyholes.

FURTHER READING

Nies, Judith. *Native American History: A Chronology of a Culture's Vast Achievements and Their Links to World Events*. New York: Ballantine Books, 1996.

Roberts, David. *In Search of the Old Ones*. New York: Simon and Schuster, 1997.

Archeological Discoveries

In locations throughout North, Central, and South America, the discovery and study of ancient archeological **artifacts** have contributed to an understanding of how and where ancient Native Americans lived. **Archeologists** and historians have spent countless hours sifting through ruined cities and earthen mounds trying to piece together the story of the earliest Americans, few of whom left any written record. In many cases, only the stones and broken pieces of pottery are left to tell the tale.

MOUND BUILDERS

When settlers moved into the Ohio Valley in the eighteenth century C.E., they noticed massive mounds and other earthworks that were clearly made by human hands. Because many settlers had little respect for Native Americans, they did not believe that natives could have constructed the mounds. In fact, Native Americans themselves did not at the time know who built the mounds, because in most cases they were not direct descendents of

The Aztec stone calendar is one of the most famous symbols of Mexico. It was carved out of basalt in the fifteenth century C.E. and represents the principal deity of the ancient Aztec, the sun. (Macduff Everton/Iconica/Getty Images)

ARCHEOLOGICAL DISCOVERIES

C.E. 1790 Great Aztec Sun Stone is unearthed in Mexico City. This ancient calendar is today the most recognizable symbol of Mexico

C.E. 1848 Publication of first Smithsonian monograph on "Ohio Mounds and Moundbuilders"

C.E. 1881–1893 Anthropologist Cyrus Thomas conducts a thorough study of mounds in several states and determines that they were constructed by Native Americans

C.E. 1911 Archeologist Hiram Bingham discovers the ruins of Machu Picchu in Peru

C.E. 1926 Archeology students uncover a mammoth skull along with stone tools in Arizona, proving that humans and mammoths lived at the same time, about 13,000 years ago

C.E. 1930s Team from the Denver Museum of Natural History discovers a mammoth skeleton along with spear points, proving that humans had hunted these creatures

C.E. 1933 A team from the Philadelphia Academy of Natural Sciences discovers Clovis points in New Mexico, proving that humans inhabited the continent at least 12,000 years ago

C.E. 1976 Archeologist Tom Dillehay begins excavations at Monte Verde in Chile, a project that will lead to the theory that humans first came to the Americas much earlier than had been thought

C.E. 1996 Kennewick Man discovered along the banks of the Columbia River in Washington, and dated at 8400 B.C.E.; it is one of the oldest sets of remains discovered in the United States; Native American groups fight to have it reburied

C.E. 2002 Archeologist Saburo Sugiyama uncovers evidence of a Mayan presence in Teotihuacán

C.E. 2006 Peruvian archeologists discover burial site of a woman of the Moche culture containing war clubs and spear throwers, items never before discovered in the tomb of a Moche female

the builders. These factors led to the idea that there had been a mysterious race of "Mound Builders" who constructed the earthworks, then disappeared.

When the Smithsonian Institution was founded in C.E. 1846, one of its first projects was to investigate the mound complexes. Historians Ephraim Squier and Edwin Davis published the first Smithsonian **monograph**, or paper on a single subject, in C.E. 1848, which concluded that peoples from Mexico had constructed the mounds. However, between C.E. 1881 and 1893, anthropologist Cyrus Thomas conducted a new study of mounds and concluded that ancestors of modern Native American groups had indeed constructed the mounds.

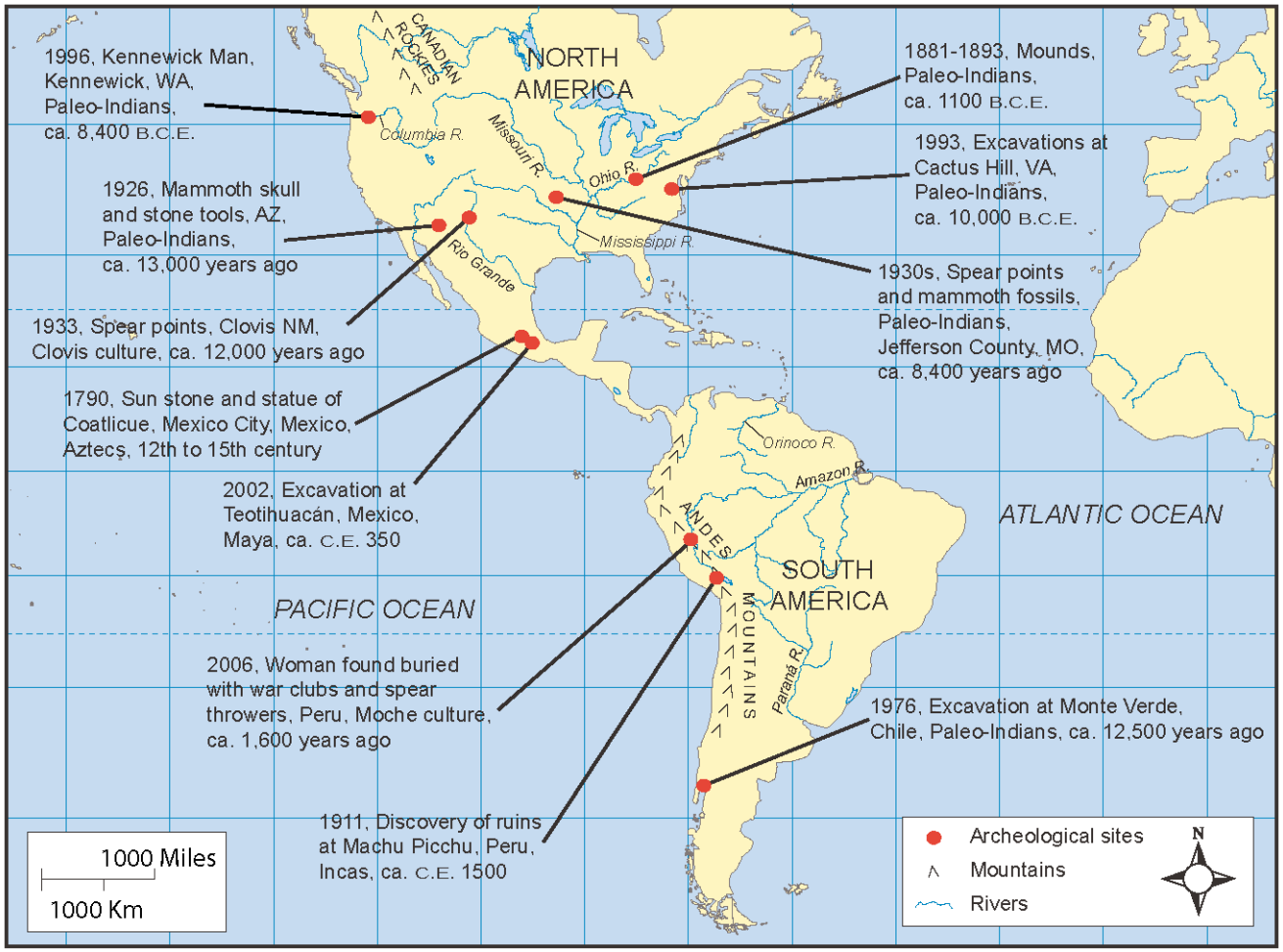
THE SOUTHWEST

In C.E. 1926, archeology students excavated a mammoth skull in Arizona. Below the skull, they found stones that clearly had been used by humans for grinding, indicating that the humans had been there at about the same time as the mammoth, at least 8,400 years ago. In the early 1930s, a team from the Denver Museum of Natural History found fluted spear points in the remains of a mammoth in what is now Jefferson County, Missouri. This was the first time anyone had discovered spear points with mammoth remains and thus this find was the first evidence that humans had hunted these creatures.

In C.E. 1933, in a dry lake bed near Clovis, New Mexico, archeologists discovered a distinctive spear point that came to be called a Clovis point, after the name of the town. When the point was dated, it proved to be nearly 12,000 years old, making it the oldest artifact ever uncovered in America. Since that time, Clovis points of a similar age have been discovered throughout North America.

MAJOR ARCHEOLOGICAL SITES OF THE ANCIENT AMERICAS

The first artifacts of Native American cultures were discovered on the East Coast because that is where the first Europeans settled. New discoveries were made to the West following the movement of the pioneers. Some of the most important finds—Clovis points, for example—occurred in the southwestern area of North America. Only in the nineteenth century did archeologists seriously explore the riches of Central and South America.



These discoveries led to several theories about how and when the first humans came to the Americas. The first widely accepted theory was that humans crossed over a land bridge called Beringia that once connected Siberia with Alaska about 12,000 years ago. They then migrated southward along a narrow space between glaciers, known as the "ice-free corridor," that stretched along the eastern edge of the Canadian Rockies.

Recent excavations on the East Coast—in places such as Allendale, Pennsylvania, and Cactus Hill, Virginia—have suggested that humans inhabited the Americas much earlier than once thought. These controversial finds have engendered what has been called the "Clovis first" debate, with some theorists holding to the idea that the continent was not populated until about 10,000 B.C.E. and others believing that there may have been people in the Americas as early as even 30,000 years ago.

Some supporters of an earlier date for settlement also believe that there may have been several waves

LINK IN TIME

Kennewick Man

One of the most controversial finds in the western part of the United States is that of what has been dubbed Kennewick Man. In C.E. 1996, a pair of college students found human remains on the banks of the Columbia River in Kennewick, Washington. When they first saw the skeleton, they thought they might have stumbled on evidence of a murder, but when the bones were examined by forensic pathologists, it became clear that they were more than 9,000 years old. This made Kennewick Man one of only about 50 skeletons that old that have been found in the Americas to date.

Although government researchers initially looked over the bones, protests from Native American groups prevented independent scientists from examining the remains for 10 years. Native Americans of the Umatilla tribe and four others claimed the bones, citing the Native American Graves Protection and Repatriation Act (NAGPRA), which is designed to return Native American **artifacts** and human remains to living descendents. They wanted the bones to be interred and not descecrated by scientific examination.

As a result of lawsuits that dragged on for 10 years, it was not until summer 2005 that scientists from the Smithsonian Institution, led by Douglas Owsley, had a chance to examine the bones to see what they would reveal about Kennewick Man and his environment. One of the most remarkable discoveries about Kennewick Man was that he appears not to be genetically related to the Siberian and Northeast Asian peoples believed to have crossed the land bridge at Beringia thousands of years ago. In fact, he may be Polynesian or Ainu (a group that now exists only in Japan), adding weight to the theory that several different groups populated the Americas at different times.

of migration from different parts of the world and by different routes. Archeologists are even studying **mitochondrial DNA** from Native American populations to determine if they can trace several sources of origin. Other anthropologists, such as Dennis Stanford of the Smithsonian, believe that the first Americans came across the Atlantic from Europe because there appear to be clear similarities between Clovis points and arrowheads found in France and Spain.

SOUTH AND CENTRAL AMERICA

Archeological finds in South America have also challenged the "Clovis first" hypothesis. In C.E. 1977, archeologist Tom Dillehay discovered evidence of human habitation in a cave in Monte Verde, Chile, that is 12,500 years old. If humans were living as far south as Chile that long ago, they must have arrived long before the opening of the ice-free corridor that supposedly allowed humans to travel southward and populate the rest of North and South America.

Another significant discovery in South America was that of Machu Picchu in Peru—the so-called "lost city of the Inca." The Inca ruled an empire in what is now South America that extended from Ecuador to Chile. The domination was ended in C.E. 1535 when soldiers from Spain, called conquistadors, attacked their cities and destroyed many elements of Incan culture. Of course, Machu Picchu was never really lost, in that natives in the area had always been aware of its existence. However, in C.E. 1911, Yale archeologist Hiram Bingham rediscovered Machu Picchu, beginning a new **era** of archeological exploration in South America.

Because Machu Picchu was so isolated, located in the Andes Mountains at 7,800 feet (2,377.5 m) of elevation, Spanish conquistadors never found it, and because the Inca left no written records, the history of this isolated city is still a mystery. Machu Picchu was a significant discovery for archeologists because it had been left virtually undisturbed for 400 years, unlike many other sites that were destroyed or looted by the Spanish.

TURNING POINT

Discovery of the Aztec Calendar

In C.E. 1790, Spanish Viceroy Juan Vicente De Güemas Pacheco de Padilla commanded that the Zócalo, or town square, in Mexico City be resurfaced. As workers dug up the old pavement, they uncovered a huge circular stone below the surface. When it was finally excavated, the stone proved to be 12 feet across (3.7 m) and three feet thick (0.9 m), and it weighed 24 tons. Ironically, the stone was preserved because of an effort on the part of Hernán Cortés, the conqueror of the Aztecs, in the sixteenth century C.E., to destroy native **artifacts**. Since the stone was too large to be broken up—the fate of many other Aztec objects—Cortés ordered it buried. It lay safely underground for more than 200 years, preserved from the ravages of time, until it was uncovered in 1790.

Thanks to the efforts of Antonio de Leon y Gama, a historian who had learned Nahuatl, the language of the Aztec, the stone was identified as the Great Aztec Sun Stone or calendar. By translating the calendar, Leon y Gama demonstrated that the Aztec had been falsely portrayed by their European conquerors as barbaric and primitive. He was able to translate some of the **hieroglyphs** on the calendar and demonstrate the sophisticated understanding of calendrical cycles its makers must have possessed. The Aztec knew, for example, the exact length of a solar year and had gained their knowledge without astronomical instruments such as the telescope.

The calendar comprises a series of concentric circles. In the center is an incised representation of the face of Tonatiuh, god of the sun. The god is shown wearing elaborate jewelry and with his tongue sticking out. The tongue is shaped like an obsidian knife, the sharp stone instrument used in human sacrifice, perhaps as an indication of the god's demand for still-beating human hearts.

Around the central circle are representations of the four epochs or suns—the four previous creations that the Aztec believed had come to disastrous ends before the beginning of the current **era**. The next ring is comprised of **glyphs** of the 20 named days of the month. The third ring includes depictions of the sun's rays and blood splashes, and at the bottom of the outer ring are two snakes facing one another. Eight equally spaced holes around the edge of the calendar once held sticks, which cast shadows as the sun's rays fell on them; thus, the stone functioned as a sundial.

Farther north, in Mexico and Central America, two archeological discoveries stand out. The first is the unearthing of the statue of Coatlicue ("serpent skirt") and the Great Aztec Sun Stone in Mexico City in C.E. 1790. Coatlicue, was the goddess of life and death in Aztec mythology. The statue depicted her wearing a skirt of writhing snakes and a necklace of hearts that had been ripped from sacrificial victims. These discoveries led to a renewed interest in the Aztec—a great civilization of Mexico that flourished from the twelfth to the fifteenth century C.E.—-as well as an enhanced understanding of their scientific and artistic achievements.

In C.E. 2002, Japanese archeologist Saburo Sugiyama found a burial at the Moon Pyramid in Teotihuacán, a city built by an unknown people, about 30 miles (48 km) northeast of Mexico City. The discovery seems to suggest direct links between the people who built this great city and the Maya, a great civilization of Mexico and Central America. The burial is at the top of the pyramid's fifth stage and may have occurred around C.E. 350, at the height of Teotihuacán's power.

Sugiyama had unearthed human remains before these, but all had been the remains of captives who were probably sacrificed. However, the

three men whose remains were found in the newly discovered site were not bound, and they were buried in a cross-legged, seated position. Such a position, Sugiyama says, is rarely seen in actual burials in Teotihuacán but has been depicted in paintings and can also be found at Mayan burial sites. Thus, Sugiyama feels that his discovery is evidence of contact between the two cultures.

Moreover, jade figurines at the burial site are of Mayan origin. Sugiyama says that these figurines seem to confirm that the Mayans were influenced by Teotihuacán. He adds that his finds are the best evidence yet of a connection between the two cultures.

In C.E. 2006, archeologists discovered one of the richest female burials ever among the ancient Moche people of Peru. The woman, who died some 1,600 years ago, was buried not only with traditional female implements such as weaving tools, but also with clubs and spear throwers, which are normally found exclusively in male burial sites. The curious find has puzzled scholars, who suggest that the woman may have been a ruler or a warrior princess.

Throughout North, Central, and South America, archeologists are gathering new and fascinating evidence that aids in the understanding of ancient cultures and that traces the path of human migration from the old to the new world.

See also: Aztec Civilization; Beringia; Cahokia; Clovis; Great Serpent Mound; Ice Age; Incan Civilization; Machu Picchu; Mayan Civilization; Mississippian Cultures; Mound Builders; Paleo-Indians; Teotihuacán.

FURTHER READING

Pringle, Heather. *In Search of Ancient North America: An Archaeological Journey to Forgotten Cultures*. New York: Wiley, 1996.

Sugiyama, Saburo. *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacán*. Cambridge: Cambridge University Press, 2005.

Art and Architecture

The idea of art for art's sake was not known among ancient Native Americans. Often the most beautiful objects, such as carved **effigy** pipes (pipes carved in the shape of people or animals), had religious or ceremonial significance. Decoration of everyday objects tended to follow traditional patterns; each culture had its own typical patterns and styles, and it was rare for artists to add individual touches to a ceramic jar or to a woven blanket.

NORTH AMERICA

Scholars group the natives of North America into five basic culture groups, based on shared values and similar practices and beliefs: Eastern Woodlands, Plains, Southwest, Northwest, and Arctic. The art and architecture of each group reflects its distinctive character, customs, and values.

Eastern Woodlands

Artists of the Adena culture (1100 B.C.E to C.E. 200) in what is now Ohio are famous for their pipes carved in the shapes of people, birds, and animals. Hopewell (200 B.C.E. to C.E. 500) artists also crafted elaborate platform pipes of pipestone or stealite. Figures of birds and animals with eyes of pearl were carved on a curved hollow platform through which the smoke was drawn; the bowl of the pipe was usually cut into the center of the figure. The effort put into creating these beautiful sculptures indicates the importance of ritual pipe smoking to these cultures.

Women in many Eastern Woodland cultures decorated clothing, shoes, knife sheaths, belts, and

This platform effigy pipe in the shape of a toad was carved by the Hopewell people between 200 B.C.E and C.E. 300 and probably belonged to a shaman who had a special connection to the spirit of the frog. (Werner Forman/Art Resource, NY)

various containers with porcupine quills. They dyed the quills, flattened them, and then attached them to fabric with sinew to form colorful geometric designs. Delaware, Ojibway, and Mohegan women were particularly skilled in quill embroidery. After the coming of the Europeans, glass beads replaced quills among many native crafters.

The Iroquois (Haudenosaunee) are famous for their wooden masks. Members of the False Face Society, whose members dance to ward off evil spirits, use these masks in religious rituals to cure the sick. Even the making of the masks formed part of the religion. A man would walk in the woods until the spirit of a particular tree spoke to him. He would respond, place tobacco at the foot of the tree, then remove a strip of bark from which to make the mask. Each mask was unique, though all of the faces have crooked noses. The mask, once shaped, was polished and decorated with hair and feathers. Modern collectors, including museums, display these masks, a practice that offends many Iroquois because they regard the masks as sacred.

Many Eastern Woodland tribes lived in longhouses (rectangular wooden buildings) or wigwams (skin-covered tents). The wigwam was built from saplings that were placed in a circle, then brought together at the top to form a cone. The wigwam was generally covered with woven mats of fibers or covered with birch bark. These architectural styles reflect the various lifeways of tribes; wigwams were temporary structures that could be easily dismantled. The coverings were packed away and transported to the next camp, where a new wigwam would be constructed. The longhouses were more permanent and housed extended families.

Great Plains

Native Americans of the Great Plains, including the Sioux, Blackfoot, Cheyenne, and Comanche—from the Mississippi to the Rocky Mountains—hunted buffalo, and much of their artwork reflected their special relationship with these animals. The tipis in which these tribes lived were constructed of wooden frames covered with buffalo hides, and the hides were often painted with scenes of heroism in battle or supernatural events. Robes and shields made of buffalo skins were also painted with the same sorts of images.

Southwest

The Anasazi (C.E. 300 to 1300) of the American Southwest made clay pottery, usually white or gray with black geometric decorations, but sometimes black on red. The decoration was painted on with brushes made from yucca. Most containers were made with round bottoms that could sit easily on the stones of a cooking fire. Although the pottery was utilitarian, its decoration may have had religious significance. Pueblo Indians, who are the probable descendents of the Anasazi, believe that Mother Earth, who resides inside the clay from which the pots are made, determines the design.

The distinctive architecture of the Southwest includes multi-story rock and mud brick apartment-like buildings called pueblos that could house hundreds of people. Within these houses were *kivas,* circular underground rooms used for ceremonies and meetings. The best known of the Anasazi great houses is Pueblo Bonito in Chaco Canyon. Pueblo Bonito had room to house more than 3,000 people in 800 rooms stacked five stories high, although **archeologists** do not believe that that many people ever actually lived there.

Northwest

Two art forms in particular are associated with the culture groups of the Northwest: totem poles and cedar masks. The design of the masks is generally similar to the design of the poles. Both are made from the cedar tree, which the culture groups of the Northwest regarded as sacred.

There are two basic styles, distinguished primarily by the colors of the paint used to decorate the poles and masks. Northern groups, such as the Haida, used only red, black, and turquoise, whereas groups to the south used many bright colors. Many consider the Haida the finest crafters of totem poles today. Their poles are elaborately carved, with every inch of space filled. The lines of the carving are sinuous and fluid, and the designs are extremely complex. Haida poles are often topped off with two or three "watchmen," figures who are said to watch over the village.

Many different creatures are represented on totem poles throughout the Pacific Northwest. Among the most famous is that of the thunderbird, a winged bird-like creature who is believed to be the lord of the sky realm. Ravens were popular figures in the myths and legends of the native peoples of the Northwest. Raven is a trickster, a liar, and sometimes a thief, but he is still a likeable creature and among the most popular figures on totem poles.

Haida make cedar masks that are used primarily by members of secret societies in dances and other rituals. They also make masks and puppets that represent the spirits of the woods, called *gagiid.* These figures have thin wrinkled faces and are painted bluish-green. The color is said to represent the face of a person who has almost drowned.

Arctic

Like all culture groups in North America, native peoples of the Arctic regions were inspired by the creatures that surrounded them and by the materials at hand in their environment. Polar bears, whales, fish, seals, walruses, and caribou are often depicted in the art of the Inuit and Yup'ik, and the materials they used included the walrus ivory. Because trees are scarce in the Arctic, masks that were used in various religious ceremonies were carved from driftwood.

MESOAMERICA AND SOUTH AMERICA

Ancient **Mesoamerican** and South American cultures include the Maya, the Aztec, and the Inca,

among others. Although each culture had distinctive traditions, they also shared many stylistic elements. For example, the pyramids of the Maya, Inca, and Aztec resemble one another much more than they do the pyramids of Egypt.

Mayan Art and Architecture

The Maya of the Yucatán Peninsula and parts of Central America are known for their elaborate calendar, their beautiful palaces and temple pyramids, multicolored pottery, and wall paintings.

During the Classic Period (C.E. 200 to 900), Mayan buildings were made of limestone, faced with lime stucco, and were decorated with elaborately carved **friezes** (decorative horizontal bands). Interiors of buildings were decorated with colorful murals, and Mayan artists even signed their work. The Maya used a structure called a corbel arch in many of their buildings. A corbel or false arch is made by layering rectangular blocks on top of one another but moving each layer inward until the blocks meet at the top. The resulting arch has a zigzag effect. Corbel arches are found in many cultures but the Maya used them to support roofs or upper stories.

The Maya are also renowned for their step pyramids. One of these is the famous pyramid at Chichén Itzá, constructed around C.E. 800 and located on the Yucatán Peninsula. The pyramid looks like a series of massive square blocks laid atop one another, each block smaller than the one below, resulting in the stepped effect. Ramps on all four sides with smaller steps were used to climb to a temple at the summit.

One of the most remarkable pieces of artwork of the Maya is the **hieroglyphic** stairway at Copán, located in western Honduras. Comprised of more than 1,250 **glyph** blocks that form a continuous text, the stairway and its statues tell the story of the city and the ancestors of the fifteenth ruler, Smoke Shell. The city of Copán flourished from C.E. 500 to 900.

Aztec Art and Architecture

The Aztec of Mexico were deeply influenced by the civilizations that preceded them; their art and architecture borrowed from earlier cultures. Their capital city of Tenochtitlán was one of the most spectacular in the Americas. It was built in the middle of Lake Texcoco, and the ancient Aztec dredged soil from the lake bottom to build floating fields called *chinampas* on which to grow food. The streets of Tenochtitlán were canals, and people often traveled from place to place by boat.

In addition to temples and pyramids, the Aztec built monumental stone sculptures of various deities. Perhaps the most famous surviving Aztec sculpture is the calendar, or sun stone, a 24-ton stone slab carved with astronomical signs and mythological figures. The calendar, once brightly painted, serves as a graphic representation of the Aztec universe. The outer rim of the calendar depicts two fire serpents who face each other at the bottom of the circle and whose tails intertwine at the top. Some historians believe that the symbol where the tails join marks the date on which the Aztec believed the world was created. In the center of the calendar is the sun god Tonatuih. His tongue, which is shaped to look like a sacrificial knife, protrudes from his mouth and in each hand he holds a sacrificial human heart. Around him are glyphs that represent the four catastrophes the Aztec believed had occurred before the present **era**.

One of the most remarkable arts of the Aztecs was feather working. Aztec **artisans** made elaborate headdresses of woven feathers plucked from brightly colored tropical birds. It is said that the headdress of the last king of the Aztec, Moctezuma II (r. C.E. 1502–1520), used feathers from more than 250 birds. Although these objects do not survive, paintings of kings and jaguars wearing feathered headdresses can be found on the walls of temples and palaces.

Incan Art and Architecture

The Inca ruled much of the western coast of South America from C.E. 1200 to 1535. Their art and architecture was much less elaborate than that of the Maya and the Aztec. The buildings of the Inca are elegant and simple and lack the elaborate decoration that was so popular among the Maya and the Aztec.

The buildings of the Inca were built of undecorated stone blocks with trapezoidal doors and windows. Stones were fitted precisely together; in fact, many were carved in place, laid atop one another then shaped to fit. Incan architecture often incorporated natural stone outcroppings into buildings and other structures. Thrones were often carved from rocks already in place. Terraces, fountains, and artificial waterfalls were characteristic of Incan cities and ceremonial centers.

Much Incan art was destroyed by Spanish soldiers led by Francisco Pizarro, who invaded and conquered the land of the Inca in C.E. 1532–1533. In particular, many gold **artifacts** were melted down and shaped into rectangular blocks for transport to Spain. One account mentions elaborate three-dimensional scenes crafted of gold, including a gold llama eating golden grass.

The Inca are also known for their beautiful woven cloth made of cotton and wool from alpacas and llamas. Some Incan cloth had thread counts of 600 to the inch, an accomplishment that was not seen again until the Industrial Revolution introduced machine-made cloth.

See also: Aztec Civilization; Incan Civilization; Mayan Civilization; Mississippian Cultures; Mound Builders; Religion; Teotihuacán.

FURTHER READING

Berlo, Janet Catherine, and Ruth B. Phillips. *Native North American Art*. New York: Oxford University Press, 1998.

Miller, Mary Ellen. *The Art of Mesoamerica: From Olmec to Aztec,* 3rd ed. London: Thames and Hudson, 2001.

Nabokov, Peter, and Robert Easton. *Native American Architecture*. New York: Oxford University Press, 1990.

Penney, David W., and George C. Longfish. *Native American Art*. Westport, CT: Hugh Lauter Levin Associates, reissued 1999.

Aztec Civilization

Ancient **Mesoamerican** culture that dominated much of what is now Mexico from about C.E. 1400 until its conquest by Spanish conquistador Hernán Cortés in C.E. 1521.

The Aztec people created one of the most sophisticated civilizations in the Americas, famous for their knowledge of astronomy, their religious architecture, and their capital city of Tenochtitlán, which was built on an island. The Aztec were also a warlike people, fighting many battles for the sake of capturing victims for sacrifice to their gods.

EARLY HISTORY

Aztec civilization began in about C.E. 1000, when a group of Native American speakers of Nahuatl—a language group that includes Commanche, Pima, and Shoshone—began to migrate south from what is today northern Mexico. They called themselves *Mexica*. The term *aztec* comes from *Aztlan,* meaning "the place of whiteness," which is the name the Mexica gave to their legendary place of origin.

Beginning in about C.E. 1100, the Aztec led nomadic lives. However, their priests told them of a promise made by their god, Huitzilopochtli, that one day they would come to an island. There, they would see a rock with a cactus growing out of it. On the cactus would be a golden eagle holding a snake in its mouth. It would be in this place that they would settle and build a great city. Today, this image appears on the Mexican coat of arms.

This detail of the "tzompantli," or wall of skulls, which was once part of an altar in the ancient Templo Mayor (Main Temple) of Tenochtitlán shows only a dozen of the hundreds of carved skull replicas that form the wall. The skulls represent captives who were beheaded as part of religious rituals. (Nick Saunders/Barbara Heller Photo Library, London/Art Resource, NY)

LINK TO PLACE

Tenochtitlán

The capital city of the Aztec Empire, Tenochtitlán was built on five separate islands in the middle of Lake Texcoco. It was connected to the mainland by three causeways and served by many canals that were built beginning in about C.E. 1350. Since the city had no roads and and people traveled by canal, the conquering Spaniards called Tenochtitlán "the Venice of the New World." By about C.E. 1400, the city was home to about 200,000 people, making it larger than most European cities of the time.

The city was divided into four main zones, which were further divided into about 20 districts. At the center of the city was the main ceremonial center, which contained about 45 buildings, including the main temple, the Temple of Quetzalcoatl, a ball court, and a *tzompantli*—a rack or altar used for the display of human skulls. The emperor Moctezuma's palace had 100 rooms, each with its own bath.

After his conquest of the Aztecs in C.E. 1521, Hernán Cortés had the city of Tenochtitlán razed to the ground. Mexico City was built on its ruins.

TENOCHTITLÁN

In about C.E. 1250 the Aztecs came under the power of the king of Colhuacan (a town on the southeastern side of Lake Texcoco in the Valley of Mexico) who forced them to fight in his army. Eventually, the king exiled the Aztecs to an island in Lake Texcoco, where they began construction of the city of Tenochtitlán in about C.E. 1325. Tenochtitlán became the central city of a vast empire that stretched throughout central Mexico.

Wealth came to Tenochtitlán as a result of conquest and innovative agricultural techniques practiced by the Aztecs. They reclaimed the swampy land surrounding the islands by dredging earth from the lake bottom and constructing *chinampas,* or "floating gardens." Here they grew beans, corn, and squash, among other crops. They also terraced the hillsides to allow for farming and irrigated lands too dry to support crops. The culture prospered because there was plenty of food for all. Farming was, however, quite labor intensive in Tenochtitlán because the Aztec had neither plow animals nor the wheel to make the work easier. Although Tenochtitlán was destroyed by a flood in C.E. 1452, the city was entirely rebuilt.

AZTEC CIVILIZATION, C.E. 1000–1522

C.E. 1000 Aztecs leave their lands in northern Mexico to search for a new homeland

C.E. 1195 Aztecs arrive in the Valley of Mexico

C.E. 1250 Aztecs settle near Lake Texcoco

C.E. 1325 The great city of Tenochtitlán founded

C.E. 1350 The building of canals in Tenochtitlán begins

C.E. 1452 Tenochtitlán destroyed by flood

C.E. 1502 Moctezuma II takes the Aztec throne

C.E. 1521 Spanish invaders destroy Tenochtitlán

C.E. 1522 Rebuilding of Tenochtitlán begins

GREAT LIVES

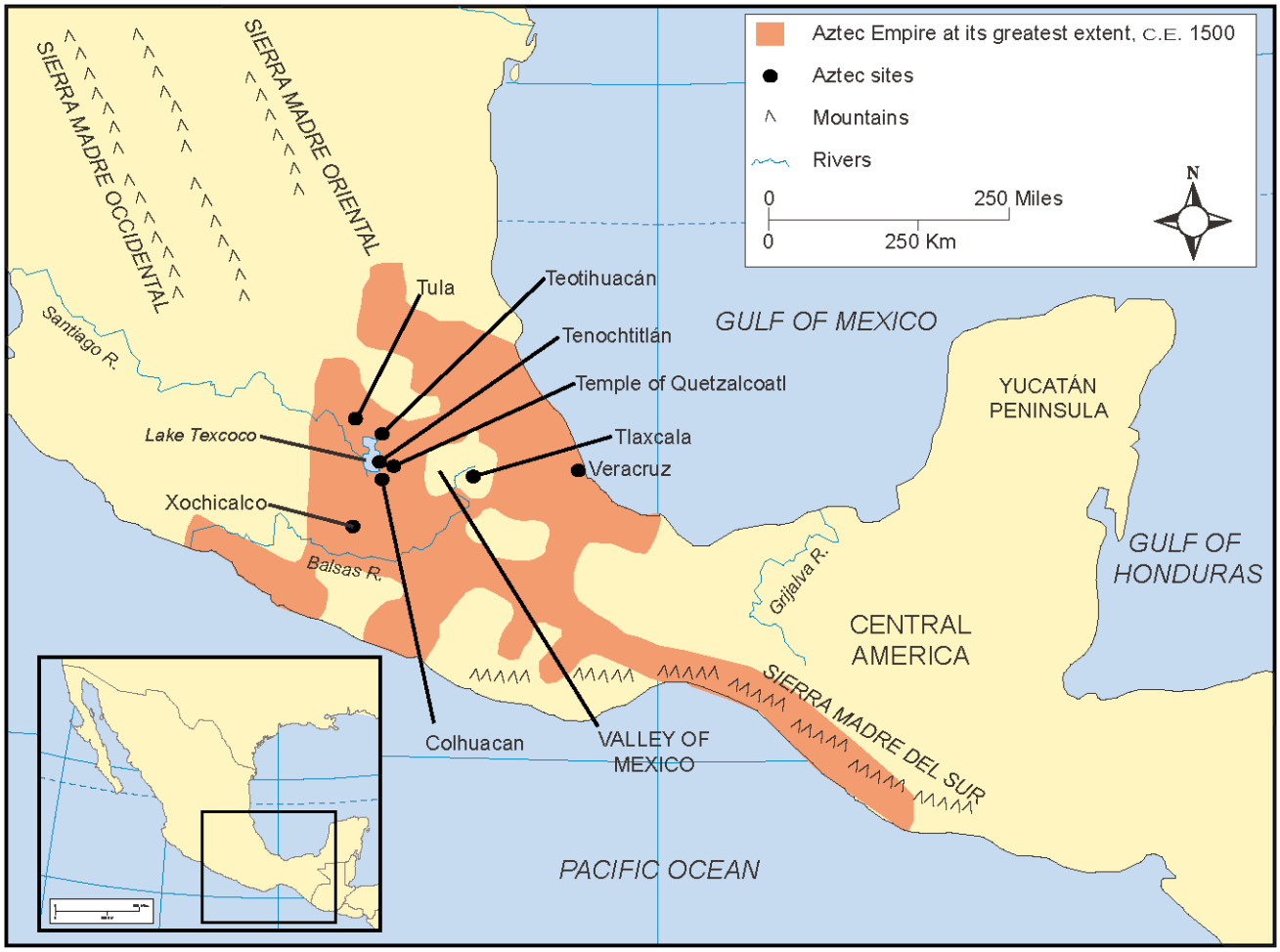
Moctezuma II

Moctezuma was the last Aztec emperor, an able administrator whose one grave error contributed to his civilization's demise. Moctezuma was both a fierce warrior and a judicious leader. It is said that he offered bribes to judges to determine if they were corrupt and went about town in disguise to see if his laws were obeyed. During his reign, aqueducts were constructed that brought fresh water to Tenochtitlán.

When Spanish troops led by Hernán Cortés landed on the Mexican coast in C.E. 1519, Moctezuma hesitated to oppose them, because an ancient Aztec legend predicted that the deity Quetzalcoatl would appear among the people as a fair-skinned visitor. Moctezuma was unsure whether Cortés was human, or the god whose visit was foretold by the legend. Moctezuma made the fatal error of allowing Cortés to march unimpeded to the capital city of Tenochtitlán and to visit the Aztec palace. Cortés entered the palace and took Moctezuma as a hostage, thus beginning a two-year war that would end in the destruction of the Aztec realm. Moctezuma died the following year after being struck by a rock while trying to calm a mob rioting against the Spanish.

AZTEC EMPIRE, CA. C.E. 1500

This map shows the extent of the Aztec Empire during its peak in Central Mexico and the heavily populated ancient cities of Tenochtitlán, Xochicalco, and Tula. The Spanish conquistador Hernán Cortés, who conquered the Aztecs in 1521, landed at Veracruz in 1519.



RELIGION

Aztec religion was based on a profound sense of the passage of time and a feeling of impending doom. The Aztec believed that the universe had been created five times and destroyed four times. They believed that only they, through ritual and sacrifice, could stave off the final destruction.

The Aztec had two calendars, ritual and solar, which synchronized every 52 years. At the end of each 52-year cycle, all the altar fires in the land were extinguished and the people mourned what they saw as the possible destruction of the universe. Priests would wait to see the constellation Pleiades appear over a particular crater in the Valley of Mexico. When it did, they believed, they were granted another 52-year cycle. At this time, the priests lit a fire in an animal carcass, from which all the altar fires in the land would be relit.

The Aztec believed that the gods would continue to protect and nourish them only if they nourished the gods through gifts of human blood. Priests routinely cut their fingers, tongues, genitals, and ears

in order to provide blood for their rituals. The Aztecs frequently engaged in human sacrifice as well. The primary purpose for warfare among the Aztec was to capture enemy warriors, who would then be sacrificed.

DEMISE

The Aztec empire came to an end in C.E. 1521, when Hernán Cortés and 500 Spanish soldiers gathered a force of local peoples who had been forced to pay **tribute** to the Aztec, and laid siege to Tenochtitlán. During the siege, which lasted two years, the city was devastated by smallpox. Soon, Cortés was able to capture the city easily, his firepower being far superior to the Aztec's bows and arrows. The Aztec chief Moctezuma II (r. C.E. 1502–1520) surrendered to Cortés, who later razed Tenochtitlán and enslaved the Aztec people.

See also: Agriculture; Art and Architecture; Mayan Civilization; Religion.

FURTHER READING

Price, T. Douglas, and Gary M. Feinman. *Images of the Past*. Mountain View, CA: Mayfield Publishing Company, 1997.

Smith, Michael Ernest. *The Aztecs (Peoples of America)*. London: Blackwell, 2002.

Beringia

Name given to the landmass that once joined Asia and North America and served as the bridge across which animals and humans are believed to have crossed from one continent to the other. The appearance and disappearance of the land bridge known as Beringia is tied to the cyclical changes in the earth's climate over time. These changes include periodic ice ages during which the climate grew intensely cold and vast rivers of ice called glaciers covered entire continents. The last of these ice ages, when glaciers covered much of North America, ended about 10,000 years ago.

During ice ages, a large amount of the earth's water was locked in glaciers, which resulted in a dramatic drop in sea level. Recurring ice ages have lowered the level of the waters in the Bering Strait, which separates Asia from North America, many times. Because the strait is not very deep (ranging from 98 feet [30 m] to 164 feet [50 m]) when the waters recede, a landmass emerges. This landmass—and the area surrounding it from the Kolyma River and the Kamchatka Peninsula in present-day Siberia to the Mackenzie River in modern Canada's Northwest Territories—is known as Beringia.

Beginning about 55 million years ago, animals migrated across this land bridge, to be followed much later by humans. **Archeologists** have long believed that the original ancestors of Native Americans originated in Asia and migrated across Beringia about 11,000 years ago. However, a number of recent discoveries have caused experts to consider the possibility that humans were in North and South America much earlier than once believed. Scientists who study ancient climate conditions note that humans could have crossed into North America over the Beringia land bridge as early as 38,000 years ago. What is certain is that by 8000 B.C.E. humans had colonized all of North and South America.

Archeologists believe that humans probably crossed the land bridge in order to hunt large mammals such as bison and mammoths. They then may have traveled southward along an ice-free trail between glaciers called the Mackenzie Corridor, so named because it follows the path of that river, which flows north from Great Slave Lake in Canada's Northwest Territory to the Arctic Ocean. Alternatively, these early immigrants may have followed the western coastline from Alaska to the tip of South America. There is no evidence for either of these theories. If people did travel down the coastline, the land that was exposed at the time is now under water, making it impossible to uncover evidence of human habitation.

For many years, experts believed that Beringia was the sole point of entry for the first settlers in the Americas. However, the discovery of "Kennewick Man" in Washington state in C.E. 1996 has led some scholars to challenge that notion. Archeologists believe that the 9,300- year-old remains of Kennewick Man are those of a **caucasoid**, suggesting the possibility of European origins. Anthropologist Dennis Stanford of the Smithsonian Institution, for example, believes that Kennewick Man may have come from Europe across the Atlantic by boat.

Recent discoveries in Monte Verde in Chile suggest evidence of human habitation dating to more than 12,000 years ago. This has led some to wonder if Polynesians may have crossed the Pacific to settle in South America. Such developments suggest that there well may have been multiple migrations and points of entry by the first settlers into the Americas and that Beringia was not the only path to the new world.

See also: Archeological Discoveries; Ice Age.

FURTHER READING

West, Frederick Hadleigh. *American Beginnings: The Prehistory and Palaeoecology of Beringia*. Chicago: University of Chicago Press, 1998.

Bison

Largest land mammal in North America. For early Native Americans, the bison, or buffalo, was extraordinarily important, serving as a principal source of food, clothing, shelter, and tools.

Native Americans used every part of any bison they killed: They ate the meat; they used the hide to make shields, moccasins, teepees, clothing, and blankets. They used the heavy fur to stuff pillows and make rope, the brain to treat the hides, the rough side of the tongue as a comb, the bones for tools and weapons, and the lining of the stomach as a cooking vessel. It is hard to imagine any other single resource, animal or mineral, that was as valuable to Native Americans as was the bison.

Bison first came to the Americas from Asia, beginning millions of years ago, across the land bridge known as Beringia, which once connected the two continents and was located about where Alaska is now, the same route used by people about 11,000 years ago. The first bison to make the trek were larger than their modern counterparts, weighing more than 5,000 pounds (2,268 k), with horns that measured more than 6 feet (1.8 m) across. Today bison weigh about 2,000 pounds (907 k) and stand about 6.5 feet (2 m) at the shoulder. Because bison are so large and formidable, early Native Americans, who hunted them on foot and with stone arrowheads, had to rely on tricks and strategy to secure a kill. As bison are not afraid of wolves, Native Americans would approach a bison herd wearing wolf skins, until they were close enough for the kill. Alternatively, they would wear buffalo skins and trick the herd into stampeding over cliffs.

Because of their heavy reliance on the bison, Native Americans felt a special reverence for the creature. For example, the Lakota Sioux, who lived on the Great Plains, tell the story of White Buffalo Calf Woman, a supernatural creature who brought gifts to the people, including the *chununpa*, or sacred pipe. After she presented her gifts to the people and promised to return one day, she rolled over four times and turned into a white buffalo. To the Lakota and many other tribes of the Great Plains, the white buffalo came to symbolize peace and harmony among all peoples of the earth.

When Europeans arrived in North America, it is estimated that there were more than 60 million bison ranging across the United States, Canada, and into parts of Mexico. By the end of the nine-

teenth century C.E., there were fewer than 800, and bison were in grave danger of extinction. European hunters killed thousands upon thousands of bison, often shooting them from train windows, and left the carcasses to rot along the tracks. Many bison were killed just for their tongues, considered a delicacy. Not only did Europeans kill bison for sport but they also killed them to deprive Native Americans of a food source, forcing them to move away from lands that the Europeans wanted for themselves. In fact, "Buffalo" Bill Cody, who later created the famous "Wild West" show, was hired to slaughter buffalo for this reason and boasted that he killed more than 4,000 in a mere two years.

Fortunately, in 1905, the American Bison Society was formed to protect the buffalo, and since that time, conservation efforts have been very successful. Today, there are at least 200,000 bison living on ranches and in parks in the American West.

See also: Beringia; Hunter-Gatherers.

FURTHER READING

Hasselstrom, Linda, James Welch, and David Fitzgerald. *Bison: Monarch of the Plains*. Portland, OR: Graphic Arts Center, 1998.

Lott, Dale. *American Bison: A Natural History*. Berkeley: University of California Press, 2003.

Cahokia

Prehistoric Native American cultural center located in present-day Illinois, across the Mississippi River from modern-day St. Louis, Missouri. At the height of its power in C.E. 1050, Cahokia was the largest city north of Mexico and one of the largest metropolitan areas in the world. Between 15,000 and 20,000 people lived in Cahokia, which was the center of a vast network of villages and smaller complexes extending from modern-day Wisconsin through what is now the midwestern and southeastern United States. Merchants from Cahokia traded with peoples from the Atlantic and as far west as modern Oklahoma.

Cahokia was built by people of the Mississippian culture, which flourished from about C.E. 600 to 1400, during a period **archeologists** call the Woodland **Era**. Cahokia was an agricultural society with sharply delineated social classes. Common people lived outside the city, while the chief, who was considered to be the brother of the sun, and nobles lived within the city. Unfortunately, the people of Cahokia left no written records, and there are not even stories or legends about this great city. Only burial and temple mounds remain to tell the story of these prehistoric people.

During its heyday, Cahokia covered 4,000 acres (1,618 hectares) and was surrounded by a wooden stockade. The stockade, which was rebuilt at least three times, was made of 20,000 logs placed in a four- to five-foot-deep (1.2 to 1.5 m) trench and covered with mud. The stockade extended more than two miles (3.2 km), and was probably built to help defend the city from enemies.

The most impressive structure in Cahokia is known as Monk's Mound, which was named for Trappist monks who lived nearby in the early years of the nineteenth century C.E. Monk's Mound is one of 120 original mounds at Cahokia and by far the largest; in fact, it is the largest pre-Columbian earthwork north of Mexico.

Monk's Mound is a flat-topped pyramid built in three tiers over a period of approximately 250 years. The base of the mound covers 14 acres (5.7 hectares) and it rises 100 feet (30 m) into the air. The people of Cahokia had to move more than 22 million cubic feet (2 million cubic m) of dirt to build the mound. Atop the mound was a 5,000 square foot (465 sq m) dwelling, probably that of the chief.

LINK TO PLACE

Stonehenge and Woodhenge

Among the modern world's most famous prehistoric remains are the huge stone circles in England known as Stonehenge. Stonehenge was originally an earthwork, comprised of mounds and ditches, constructed some 5,000 years ago. (The word *henge* refers to a circular or oval area surrounded by a bank and ditch.) About 2,000 years ago, huge stones were added to the earthworks and arranged in concentric circles.

No one knows who built Stonehenge, but it clearly seems to have been constructed as a type of calendar used to predict the **solstices** (June 21 and December 21) and **equinoxes** (March 21 and September 21) which mark the changing seasons. On the summer solstice, June 21, the sun rises over what has been dubbed the Heelstone and shines directly into the center of the monument. Some archeologists speculate that the builders celebrated the solstices and equinoxes as religious festivals.

In the early 1960s, archeologist Warren Wittry of the University of Chicago uncovered a number of oval pits at the Cahokia mound in Illinois, an earthwork that appeared to form circles and arcs. Wittry hypothesized that the pits had once contained wooden posts that were arranged to align with the sun at certain times of the year. He named the structure Woodhenge because of its resemblance in form and function to Stonehenge. Although archeologists have identified posts at Woodhenge which mark the solstices and equinoxes, the function of other posts is unknown. Some scholars speculate that the posts align with stars or the moon; others suggest that the posts helped builders align the mounds.

Wittry found evidence of at least five additional "Woodhenges" at Cahokia, built from C.E. 900–1100, about 1,000 years after the stones were raised at Stonehenge. The structures varied greatly in size, containing anywhere from 24 to 60 posts. One circle, reconstructed in 1985, measured 400 feet (121.9 m) in diameter with posts some 20 feet (6 m) high.

Monk's Mound stands at the center of the city, surrounded by four large plazas oriented toward each of the cardinal directions and used for ceremonies attended by thousands of people. Pathways connected dwellings, burial mounds, public buildings, and temples.

Among the most interesting features at Cahokia are circles of huge red cedar posts that archeologists have dubbed "Woodhenges," after Stonehenge, the famous stone circle in England. There may have been as many as five of these at Cahokia, ranging in diameter from 240 to 480 feet (73 to 146 m). The circles were probably calendars in which the poles lined up with the sun on certain days of the year.

There are three types of mounds at Cahokia: platform mounds like Monk's Mound, which were used for the construction of buildings, and conical and ridgetop mounds, both of which were used for burials of nobility or as markers for important locations. Extensive excavation of one ridgetop mound, known as Mound 72, revealed that the mound was constructed in at least three stages over many years. The mound contains the remains of a man who was laid out in such a manner that he resembled a bird. In another layer of the mound, excavators found 53 young women between the ages of 15 and 30, and four men whose heads and hands had been removed. These individuals apparently were sacrificed as part of a religious ritual. Altogether, 272 bodies were unearthed in Mound 72, along with hundreds of stone arrow points.

Only a complex, **stratified** society could have managed the labor required to build and maintain

the huge complex, and only a culture with food surpluses could have created such a society. Cahokia is ideally located for agricultural production, in a valley just south of where the Missouri, the Mississippi, and Illinois Rivers come together. Like the Nile River, these three waterways flooded each year, leaving rich deposits of silt in which to plant crops. Thus, the people of Cahokia were able to grow a number of crops, including squash, pumpkins, sunflowers, and corn. They also gathered nuts and berries and hunted and fished. Most of the tools they used were fashioned out of stone, and they made pottery from the clay from a nearby stream.

The first French explorers who arrived in Cahokia found that the Native Americans who lived nearby did not have the sophistication to build such a city, and that they knew nothing about the people who had built this one. As a result, the settlers speculated that the remains were created by an earlier race of "Mound Builders" that had since disappeared. Modern archeologists have demonstrated convincingly that Cahokia and other mound complexes were indeed constructed by Native Americans, but what happened to the residents of Cahokia is a mystery. By C.E. 1400 Cahokia was deserted and the people gone.

Perhaps years of drought had forced the residents to leave, or perhaps warfare or disease decimated the population. Even those tribes who may be descended from the builders of Cahokia—the Osage, Omaha, Ponca, and Quapaw—have no legends or songs about these mysterious people.

See also: Agriculture; Archeological Discoveries; Mississippian Cultures; Mound Builders; Society.

FURTHER READING

Kitt Chappell, Sally A. *Cahokia: Mirror of the Cosmos.* Chicago: University of Chicago Press, 2002.

Pauketat, Timothy R., and Rita P. Wright. *Ancient Cahokia and the Mississippians.* London, Cambridge University Press, 2004.

Clovis

Term used to refer to prehistoric people who arrived in what is now the southwestern United States in about 10,000 B.C.E. Named by **archeologists** in C.E. 1932 for a site in Clovis, New Mexico, these people were assumed for many years to have been the ancestors of all native peoples in North and South America.

ARCHEOLOGICAL DISCOVERY

In the late nineteenth and early twentieth centuries, most American archeologists believed that Native Americans were relatively recent colonists in the New World. This belief made it easier, some say, for European colonists to claim the land as their own and dispossess the "natives." However, discoveries in the early years of the twentieth century C.E. challenged that assumption, suggesting that people were living in North America in 10,000 B.C.E. More recent discoveries have continued to push back the date when, it is believed, that the first humans crossed from the "old" world to the "new." Some archeologists, such as Albert Goodyear of the University of South Carolina, now believe humans were in North America 50,000 years ago.

In C.E. 1927, in Folsom, New Mexico, a species of bison that had been extinct since the last Ice Age (70,000–8500 B.C.E.) was uncovered, with stone spear points embedded in the animal's ribs. This find confirmed that people had lived in America earlier than once believed. Then, in C.E. 1932, in Clovis, New Mexico, Edgar Howard of the University of Pennsylvania found spear points that were of an earlier date than those unearthed at Folsom. With the points, he also discovered the carcass of a

CLOVIS PEOPLE, CA. 10,000 B.C.E.–8500 B.C.E.

40,000 B.C.E. Possible date of earliest settlement by humans in the Americas

23,000 B.C.E. Earliest date of an ice-free passage between glaciers through which people may have traveled to populate the Americas

10,000 B.C.E. Approximate date of arrival of Clovis people in the southwestern part of what is now the United States

8500 B.C.E. Clovis people vanish from the archeological record

C.E. 1927 Ice Age bison with spear points nearby discovered, demonstrating that humans and bison lived at the same time

C.E. 1932 Discovery of Clovis points, indicating that people lived in North America much earlier than once supposed

C.E. 2003 Studies demonstrate that the mass extinction of animal species was probably due to climate change, not hunting

mammoth, indicating that people had been in the Americas more than 10,000 years ago. He called the people who created these distinctive bifaced spear points "Clovis." Since the discovery in Clovis, many other such sites have been found and dated. In about 8500 B.C.E., Clovis people vanish from the archeological record.

EARLY THEORIES

Archeologists believe that the Clovis people came from Siberia to the Americas across a landmass, known as Beringia, that connected Asia and North America during the most recent Ice Age. There were two brief periods—before 23,000 B.C.E. and after 11,000 B.C.E.—during which the glaciers that covered much of what is now Canada moved apart to expose an ice-free corridor more than 1,000 miles (1,609 km) long and from 15 to 60 miles (24 to 97 m) wide. Following that corridor and continuing southward from Canada, the Clovis people would have crossed through parts of what is now New Mexico, where the first **artifacts** were found.

Not much is known about the Clovis people, except that they were nomadic and excellent big-game hunters who used distinctive stone-tipped spears to kill animals that are now extinct. In fact, in C.E. 1967, biologist Paul Martin of the University of Arizona hypothesized that the mass extinction of 33 species including ground sloths, tapirs, mammoths, mastodons, and saber-tooth cats was caused by the Clovis people and their descendents. He believed that these hunters were especially effective because their prey had not developed a fear of humans and were thus easy to kill in large numbers. More recent studies have discounted this theory, however, and scientists now believe that the extinction was brought about by climate change, not overhunting.

NEW THEORIES

Since the 1980s, many alternative theories have been proposed about the identity of the first peoples who came to America, and when and how they arrived. These theories have arisen as a result of a number of excavations at places such as Topper in South Carolina, Meadowcroft Rockshelter in Pennsylvania, Cactus Hill in Virginia, and Monte Verde in Chile.

In all of these places, archeologists believe they have found evidence of human settlement as many as 25,000 to 50,000 years ago, though the evidence is still widely disputed. This suggests that Clovis people may not have been the earliest settlers in the Americas. Some scholars now believe that there were several migrations to America from various parts of the globe—Europeans crossing the Atlantic, Polynesians crossing the Pacific, and Ainu and Mongols crossing Beringia may all have settled in the Americas at different times.

See also: Beringia; Hunter-Gatherers; Ice Age; Mammoths; Paleo-Indians; Tools and Weapons.

FURTHER READING

Frison, George et al. *The Fenn Cache: Clovis Weapons and Tools*. Salt Lake City: University of Utah Press, 2002.

James, Peter, and Nick Thorpe. *Ancient Mysteries*. New York: Ballantine, 1999.

Culture and Traditions

Because most Native American groups did not have writing, **archeologists** and historians have to piece together many elements of these ancient cultures from material remains. Anthropological studies of surviving Native American societies in the late nineteenth and early twentieth centuries have also provided insights into ancient cultural traditions, such as customs and beliefs, ceremonies, values, and behavioral patterns.

Before the arrival of Europeans, hundreds of different tribes with widely varying lifestyles lived in the Americas. Still, it is possible to generalize about certain common elements of culture that were shared by many groups.

FAMILY AND KINSHIP

In many Native American groups, the nuclear family (mother, father, and children) was less important than the clan or kinship group (the extended family). How that extended family was defined differed from tribe to tribe.

North American Groups

Some kinship systems, such as that of the Omaha, a tribe whose homeland was in what is now northeastern Nebraska, traced descent through the father, while others, including the Iroquois (Haudenosaunee), a tribe of northeastern America, traced descent through the mother. In some tribes, a man who married joined the clan of his wife; in others, the woman joined her husband's clan.

Within a clan system, each individual is supported by a complex net of relationships with the clans of both parents. Generally clans are exogamic, meaning that a person must marry someone who does not belong to either the father's or the mother's clan. This was true, for example, of the Chickasaw, who lived in what is now Alabama.

In many native groups, each clan had specific rites and duties. For example, in some groups, chiefs could be chosen only from specific clans. Among the Mohawk, it was the women of these clans who selected the chief. Among the Iroquois and Muskhogean tribes, if a clan suffered a loss of a member, the clans whose sons had married into the grieving clan would prepare the death feast and take care of all the details of the funeral. If a clan member was killed in a battle, it was the duty of other members to avenge the death and, in some cases, to find someone to assume the dead warrior's role in the clan. An outsider who replaced a dead warrior would be adopted into the clan, marry the widow, and in every respect live the life of the deceased. In fact, Native American groups frequently adopted captives into clans in order to replace lost members. The Iroquois went so far as to adopt entire tribes to make up for the losses they incurred in their frequent battles.

Mexican, Central American, and South American Groups

One major distinction that can be made among Native American groups is that between North American groups and those to the south. While native North Americans generally did not evolve complex social hierarchies and urban centers, such cultures did evolve in Central and South America.

MAJOR CULTURAL AREAS OF THE ANCIENT AMERICAS, CA. 2000 B.C.E.–C.E. 1500

Illustrated here are the sites of the major cultural groups of the Americas. The East Coast was home to the Eastern Woodland tradition. To the west lived the Plains Indians; farther west were the California Indians and the southwestern culture groups. To the north lived the Northwest Coastal Indians and the Inuit. To the south, in what is now Mexico and Central America, were various Mesoamerican groups. Of the South American tribes, that of the Inca was the largest, with perhaps as many as 10 million people occupying what is now Peru.

Nevertheless, the lives of the ordinary people were similar to those of their northern cousins.

The Aztec were organized into extended families comprised of several brothers and their families. Families worked together to farm the land, but these extended families did not own the land that they farmed. Land was owned by *calpulli,* groups of families who shared a common ancestor. The calpulli owned the land, established schools for boys, and collected taxes to pay to the central government.

In the cities, calpulli were larger and tended to be made up of people who shared an occupation. The urban calpulli lived in particular sections of the city and tended to keep to themselves. The leaders of each calpulli formed a city council, which, in turn, selected the *tlatoani,* or leader, of the city. Although the Aztec system of government began as a kind of democracy, the position of tlatoani eventually became hereditary. At the time Europeans came to Central America in the sixteenth century C.E., there were 20 major calpulli, plus 40 associated calpulli in Tenochtitlán.

In Incan society, people were grouped by kinship ties into *ayllus,* which owned land in common and parceled it out to families to farm. The concept of reciprocity was very important to the Inca. Families had the right to ask other families for help in cultivating the land, in return for which the head of the household would give food and *chicha* (an alcoholic beverage). Ayllus were also expected to help one another.

The Maya lived in extended family groups. A household might consist of several related adults, their parents and children. Large families were very useful in farming the land. Family groups tended to build their houses around courtyards where many group activities occurred.

MARRIAGE AND THE ROLE OF WOMEN

There is great diversity in the marriage customs of various culture groups in the Americas, although one common characteristic is that marriage was primarily regarded as an economic, rather than a romantic, institution. In general, the clan system was used as a way to prevent marriages between closely related individuals. However, many groups, including the Maya, permitted first cousins to marry one another. In general, parents or other relatives tended to select their children's mates. Most American culture groups practiced **monogamy**, but **polygamy** was common among chiefs and nobles. Mayan, Incan, and Aztec kings and some members of the nobility were allowed to have multiple wives.

LINK TO PLACE

Chaco Canyon

Chaco Canyon is located in the northwest corner of New Mexico. It is about 10 miles (16.1 km) long and relatively shallow. The canyon itself is at an elevation of about 6,200 feet (1890 m), which is considered the high desert. Evidence of human presence in the canyon goes back nearly 5,000 years. But a major change took place in about C.E. 850. That is when people began to build permanent settlements in the canyon. The buildings they built were four or five stories tall, and many contained 700 or 800 rooms, including *kivas,* circular underground rooms used for ceremonies. Each great house was built in such a way that it was easily seen by another, which allowed people to communicate quickly and effectively. These great houses were linked to neighboring communities by a system of roads. This great city was evidence of an organized and sophisticated culture. The builders were clearly skilled astronomers, since many of the structures in the canyon are aligned with celestial phenomena. The Sun Dagger, for example, is a **petroglyph** that marks solar cycles.

The city flourished for about 300 years but was suddenly abandoned. No one knows exactly why, but some believe a drought may have contributed to the abandonment.

An ancient stone archway on Taquile Island in Peru's Lake Titicaca, the highest navigable lake in the world. An Incan creation myth tells how their civilization began in and around the lake, which is still considered sacred to the Incan people. (Kevin Schafer/Stone/Getty Images)

Women generally were well regarded and well treated among native North Americans. Especially in **matrilineal** groups, such as among the Iroquois, women held high social status and were responsible for choosing or deposing chiefs. In fact, early women's rights organizations in the United States were influenced by Native American concepts of equality. Lucretia Coffin Mott, a nineteenth-century C.E. Quaker advocate for women's rights, was deeply influenced by her knowledge of the lives of women of the Seneca tribe, as was Matilda Joslyn Gage, one of the three founders of the National Woman Suffrage Association.

Nevertheless, it can hardly be said that men and women were equal in these ancient cultures; the roles of men and women differed substantially. In North America, women tended to the home and did most of the agricultural work, while men hunted, engaged in warfare, and did the heavy agricultural work such as clearing fields. Women also made pottery, tanned hides, and gathered nuts and berries. In Central American and South American cultures, where farming tended to be more difficult work because of the terrain, men did the intensive farming while women tended smaller vegetable gardens. Weaving in all the cultures of the Americas was considered primarily women's work. In Central and South America, a substantial portion of a woman's day was spent grinding corn into flour—a task that had been done by machine in the Old World for many centuries, thanks to the invention of the wheel and the use of beasts of burden, neither of which was much used in the New World.

Women also played religious roles in these societies. Women could be **shamans** or priestesses, which were considered very high-status roles. The

Inca worshipped the sun as the central deity, but they also worshipped the moon, which represented the female principle—which in turn controlled both agricultural and human fertility. They had temples that were devoted to goddesses and staffed by priestesses, called *mamaconas*. The Aztec, too, had priestesses.

BELIEFS, CEREMONIES, AND TABOOS

Religion was an important part of Native American life and influenced nearly everything people did, including burial customs. Native North American traditions, such as the vision quest, in which young men went into the wilderness to fast and pray in search of important truths about themselves, were based on religious beliefs. The same is true of the sweat lodge ceremony, in which men gathered in a small structure with hot rocks in the center over which water was poured. This ritual was thought to purify the body and soul.

Many ceremonies and rituals of Central and South America were elaborate gatherings that included thousands of people, all come to the city for the purpose of appeasing or thanking the gods. **Mesoamerican** religions all taught that the gods must be nourished with sacrifices of human blood, and bloodletting played a central role in many religious ceremonies. Priests and kings, in particular, were expected to pierce their tongues, ears, and genitals, catch the blood on paper, then burn the paper. Human sacrifice was also practiced, most particularly among the Aztec, who brought captives to the tops of pyramids, cut out their living hearts, and rolled the bodies down the steps. Even the famous ball games of Mesoamerica were inspired by religious beliefs. The players reenacted the eternal battle between the forces of light and the forces of dark—and losers were often sacrificed.

Nearly all rituals associated with death were also based on specific religious beliefs about the afterlife, and particularly on the idea that people could take property with them into the next world. In the sharply **stratified** societies of Central and South America, kings were buried with expensive objects and even, in some cases, wives and slaves, much like the Egyptian pharaohs. Ancient societies in North America were not as stratified as those to the south, but richer individuals were buried with more and more elaborate objects than ordinary people. Chiefs might be buried with fine pottery, shell jewelry, and beautifully carved pipes, while ordinary people would be buried with cruder examples of these objects. But all of these cultures believed firmly that a person must be buried with things he or she would need in the next life.

Taboos, or forbidden behaviors, were also inspired by religious beliefs. Native North Americans believed that all things were animated by a spirit, and that belief led them to certain taboos. In many groups, clans had particular animals that were sacred to them—called totems—and it was forbidden to hunt these animals; a clan associated with deer, for example, could not hunt deer. In essence, these groups felt themselves to be descended from certain animals and killing the totem animal would be like killing a relative. In the Pacific Northwest, the parents of twins kept them away from water, because they believed such children would become salmon if brought too close. In some cultures, it was taboo to speak the name of a person who had died.

Certain places were considered sacred and had many taboos associated with them, especially taboos requiring fasting and sexual abstinence before one approached these locations. In Incan mythology, for example, the children of the sun are believed to have emerged from Lake Titicaca in what is now Peru, and the place is still considered holy by native peoples. The Maya considered caves sacred and often built their cities and temples near the entrances to caves. It is thought that nobles and priests conducted secret ceremonies in certain caves.

Native American cultures still provide fertile ground for archeologists and anthropologists to study many different customs and traditions. Today, many people are rediscovering and experiencing elements of these ancient cultures. The vision quest

and the sweatlodge are just two examples of ancient traditions that are alive today, not only among Native Americans but among Americans of all heritages.

See also: Aztec Civilization; Incan Civilization; Mayan Civilization; Religion; Slavery; Society.

FURTHER READING

Hinds, Kathryn. *The Incas (Cultures of the Past)*. New York: Benchmark Books, 1998.

Pritzer, Barry M. *A Native American Encyclopedia: History, Culture, and Peoples*. New York: Oxford University Press, 2000.

Sharer, Robert J. *Daily Life in Maya Civilization*. Westport, CT: Greenwood Press, 1996.

Waldman, Carl, and Molly Braun. *Atlas of the North American Indian*. New York: Checkmark Books, 2000.

Great Serpent Mound

A prehistoric **effigy** mound, in the shape of a serpent, located in Adams County in modern-day southern Ohio. Many prehistoric Mound Building cultures built effigy mounds, earthen sculptures in the shape of sacred animals, for use as tombs or for ceremonies. The largest and most impressive of these is the Great Serpent Mound, which measures 1,300 feet long (396 m), four to six feet high (1.2 to 1.8 m), and ranges from three to 25 feet in width (.9 to 7.6m). It is shaped like a snake, curving along the landscape. Directly in front of the head is an oval enclosure that is about 60 by 120 feet (18 by 36 m). The significance of the oval is uncertain.

LINK IN TIME

Poverty Point Earthworks (Louisiana)

Poverty Point, located in northeastern Louisiana, is the site of the oldest prehistoric American earthworks, built between 1800 and 1400 B.C.E. An explorer named Jacob Walters discovered Native American **artifacts** there in C.E. 1840, but the importance of the site was not recognized until an aerial photograph taken in the C.E. 1930s was rediscovered in the 1950s. The photograph revealed the remarkable size and structure of the earthworks, making it clear that Poverty Point had been constructed by a sophisticated ancient American culture.

The earthworks seen from above look like a huge letter "C," made of six concentric earthen embankments, separated by ditches from which the dirt was taken. In the center of the semicircle is a large plaza. On the outside of the semicircle are five other mounds, two of which are **effigy** mounds in the shape of birds.

If the mounds at Poverty Point were laid end to end, they would be almost eight miles (13 km) long. Once six feet (1.8 m) high, they have eroded over the centuries to only one or two feet (0.3 to 0.6 m) high. The mounds were probably used for burial, and there may be as many as a thousand individuals interred there.

For many years, **archeologists** believed that members of the Adena Culture (a prehistoric group that lived in present-day Ohio, Indiana, West Virginia, Kentucky, Pennsylvania, and New York from about 1000 B.C.E. to C.E. 100) built the Great Serpent Mound. In 1996, however, **radio-carbon dating** of wood charcoal from two parts of the mound indicated that the serpent is of a later date, about C.E. 1070. This would suggest that the Serpent Mound was built by the Fort Ancient culture, a Mississippian group that lived in the Ohio Valley from about C.E. 900 to 1600.

The precise purpose for which the mound was constructed is unclear. When the first European settlers in the area came upon the mound, there was a stone altar in the head that had been used to burn sacrificial offerings. As archeologists have excavated the mound over the years, they have also found ceremonial knives. Because headless skeletons have been unearthed in nearby graves, some archeologists speculate that human sacrifice may have been conducted there. Other scholars suggest that the mound may also have been used for astronomical observation.

See also: Adena; Archeological Discoveries; Mississippian Cultures; Mound Builders; Religion.

FURTHER READING

Randall, Emilius O. *Serpent Mound Adams County, Ohio*. Whitefish, MT: Kessinger Publishing, 2003.

Hohokam

A Native American group that lived in the southwestern deserts of North America from about C.E. 200 to C.E. 1450 and successfully farmed the desert using sophisticated irrigation techniques. It is believed that the Hohokam, whose name in the Pima language means "the people who vanished," migrated from Mexico. They brought with them some of the technology of **Mesoamerican** cultures, including knowledge of agriculture and pottery-making methods.

FOUR PERIODS OF HISTORY

Archeologists have divided the history of the Hohokam into four periods: Pioneer, Colonial, Sedentary, and Classic. In the first period, Pioneer (300 B.C.E to C.E. 550), Hohokam farmers lived along the Gila River in southern Arizona. They grew corn and beans. In about C.E. 550 they began to irrigate their fields by digging canals from the nearby river. They also dug wells for drinking water. Their homes were made of branches covered with mud; the foundations were dug one or two feet (0.3 or 0.6 m) into the earth.

During this period, the Hohokam began to plant new crops that, archeologists believe, they acquired through trading with peoples to the south in what is now Mexico. These included cotton, several different kinds of beans and squashes, and pigweed, also known as amaranth, the seeds of which were ground into flour and eaten like popcorn.

During the Colonial Period (C.E. 550 to 900), the Hohokam villages grew larger, and there is evidence of social distinctions in the grave goods associated with some of the remains. The Hohokam did not like living in close quarters, preferring instead what has been called the *ranchera* style, with widely separated homes within a village. In Snaketown, south of Phoenix, Arizona, for example, about 1,000 people lived spread out across 400 acres (161 hectares).

Perhaps influenced by their Mesoamerican neighbors to the south, the Hohokam built large ball courts that were used for games and other religious ceremonies. Archeologists have uncovered 139 such courts, which are about the size of modern tennis courts.

HOHOKAM CULTURE, 300 B.C.E.–C.E. 1450

300 B.C.E.–C.E. 550 Pioneer Period of Hohokam culture; settlements small and scattered; plainware is replaced by buff-colored pottery

C.E. 550–900 Colonial Period of Hohokam culture; a time of cultural stabilization and expanding influence; pottery becomes more elaborate

ca. C.E. 550 Hohokam begin building their system of irrigation canals

C.E. 900–1200 Sedentary Period; Hohokam culture reaches its peak; characteristic pottery is red on buff; hundreds of miles of canals are completed

C.E. 1200–1450 Classic Period; Hohokam build larger communities

ca. C.E. 1350 Population begins to decline

During the Sedentary Period (C.E. 900 to 1200), population growth led to an increase in the number and size of the canals. Altogether, the Hohokam may have irrigated as many as 100,000 acres (40,500 hectares) with hundreds of miles of canals. Scientists have estimated that the Hohokam moved 11,000,000 cubic yards (764,554 cubic m) of soil during the Classic Period alone. Remarkably, the Hohokam built these canals without the aid of metal tools or beasts of burden, in hard soil consisting of decomposed rock held together by the tenacious roots of desert plants.

Digging the canals required not only physical strength and manual labor but also knowledge of hydraulics (the science of using liquids to do mechanical work) and engineering. Those who planned and built the canals must have possessed the ability to perform complex mathematical calculations in order to determine the volume of water needed to irrigate fields miles from the main canal, and the grade needed to keep water flowing at a carefully controlled rate.

In addition to technical and engineering knowledge, the Hohokam had a sophisticated political organization in order to plan, construct, maintain, and repair their complicated network of canals. In times of drought, for example, leaders likely had to make and implement difficult decisions about which fields got water and which did not. They also would have needed to manage the constant work of keeping the canals free of silt.

The Sedentary Period also was marked by a blossoming of Hohokam **artisans**, including fine potters, weavers, and jewelers. The Hohokam made pottery with elaborate decoration in red, black, and white on buff (brownish yellow) and cotton cloth for clothing and other uses, such as bags and bedding.

The Hohokam were the first to use acid etching to make beautiful designs on shells, a technique that was not discovered in Europe for another several centuries. They painted designs on seashells with pitch, then dropped the shells into an acid made from fermented cactus juice. The acid dissolved the unprotected surface, leaving the pitch-covered portion in **relief**. Artists then removed the pitch and painted the raised portions of the shells.

The Hohokam often painted a design on pottery of a figure carrying a staff, called the "burden basket carrier." This figure is probably that of a trader, indicating how important trade was to this culture and suggesting extensive trading networks. For example, the shells decorated by acid etching were obtained through trade with peoples as far away as California. The Hohokam also brought copper bells, plaques of iron pyrite, and exotic birds from Mexico.

The final period of Hohokam culture is referred to as the Classic Period (C.E. 1200 to 1450). During this time, increased population, and perhaps the threat of warfare, led to the formation of larger communities. Homes in these communities were constructed closely together around central plazas, and adobe walls surrounded each community. Some communities had large "Great Houses" that were made of stone or adobe and were up to four stories

high. These houses were probably intended for the elite members of the group.

DEMISE

By C.E. 1350, the Hohokam population began to decline, and people moved away from the large settlements. No one is sure why, but most scientists speculate that environmental factors played a part. Droughts and floods are not uncommon in desert regions, and overfarming can degrade the environment to the extent that the land no longer yields what it once did.

There is evidence, though, that the Hohokam were careful to preserve their environment, and their irrigation and farming techniques had very positive effects on the land. They cultivated many native desert plants, took great care of trees, and added to the fertility of the fields through the silt deposited by irrigation. Nevertheless, families moved away from the large settlements and wandered the desert in small bands, uniting again as the Pima culture some time in the eighteenth century C.E.

See also: Agriculture; Aztec Civilization; Hunter-Gatherers; Mayan Civilization; Technology and Inventions.

FURTHER READING

Barstad, Jan. *Hohokam Pottery*. Tucscon, AZ: Southwest Parks and Monuments Association, 1999.

Noble, David. *The Hohokam: Ancient People of the Desert*. Santa Fe, NM: School of American Research Press, 1991.

Hopewell Culture

See Mound Builders.

Hunter-Gatherers

The earliest people to populate the Americas, who lived by means of hunting prey animals and gathering food that grew naturally. A preagricultural people, the earliest Native Americans did not plant crops and were nomadic, wandering from place to place in search of food.

Many Native American peoples practiced hunting and gathering until the time of European settlement, although some groups in Mexico had begun planting crops as early as 3000 B.C.E. By about 2000 B.C.E., culture groups in the American Southwest had also begun to farm and live in permanent settlements, as did people along the upper Missouri River. Many Native American groups, however, continued to live by hunting and gathering, even in places where they were aware of farming.

Farming is very labor intensive. The hunter-gatherer lifestyle, by contrast, allows people many free hours daily to enjoy games, conversation, and other leisure activities. Thus, successful hunter-gatherer societies tend not to take up farming. Even when Native American cultures adopted farming, the hunt was still an important event, and the meat that hunters killed was an important source of protein and animal skins.

Among Native Americans, gathering was usually done by women. Although Native American women collected nuts, seeds, and berries, they also "gathered" small animals and insects as food. In some cases, gathering was a complicated process, involving the entire group. Gathering pine nuts, a staple food among Native Americans of the Great Basin, a cool desert in what is now Nevada, Utah, and Arizona, required considerable work and the participation of many people, including men. Men harvested pine cones from trees, and women and children

carried the cones back to camp in baskets. Women roasted the cones until the nuts could be easily removed, then roasted the nuts again to remove the shells. Then they either stored the nuts whole or ground them into flour.

Native American hunters used three basic weapons. The first was a simple thrusting spear, a long shaft with a stone projectile point on the end. Such weapons were used only at close range. Hunters often held the spear and thrust it into the animal or threw it a short distance. The *atlatl,* a device that allowed the hunter to throw the projectile much farther and faster, made him a more effective hunter. However, the bow and arrow was by far the most effective weapon of the hunt due to its superior range and accuracy.

Material possessions hindered the mobility of hunting and gathering groups, so people in such societies did not accumulate more than could be easily transported. Because social stratification is based on the accumulation of wealth, hunter-gatherer societies tended not to be **hierarchical**. In addition, because the groups were small (numbering from 30 to 60), they did not require complex social structures.

In recent years, several previously unknown hunter-gatherer groups have been discovered in the Americas, including the Nukak of central Colombia. First contacted by outsiders in 1988, the Nukak have begun to leave their native rainforest habitat. In 2006, some 80 Nukak arrived in the city of San José del Guaviare, possibly as refugees from civil violence in Colombia.

See also: Agriculture; Archeological Discoveries; Mound Builders; Society.

FURTHER READING

Hoxie, Frederick E. *Encyclopedia of North American Indians: Native American History, Culture, and Life from Paleo-Indians to the Present*. New York: Houghton Mifflin, 1996.

Ice Age

Period of intense glaciation marked by extremely cold climate. The most recent Ice Age in the Americas began about 70,000 years ago and ended about 10,500 years ago.

Most scientists believe that ice ages result from a combination of several factors, including the composition of the earth's atmosphere, changes in the earth's orbit around the sun, variations in solar activity, the orbital dynamics of the earth-moon system, the impact of meteorites, and volcanic eruptions. The first of these factors is considered the most important. An abundance of land within the Arctic and Antarctic circles also appears to be a prerequisite for an ice age. Snow and ice accumulating on such landmasses reflects the sun's heat back into space, thereby cooling the earth. Although the earth's orbit does not seem to be a major cause of ice ages, it does seem to affect the pattern of freezing and thawing that take place during an ice age.

Earth has experienced several ice ages throughout its history, but the term is usually applied to the most recent glaciation, when large animals such as woolly mammoths and mastodons roamed the continents. It was during this ice age that the first people came to the Americas. Scholars speculate that Asian peoples migrated to North America across a landmass, known as Beringia, that once joined the two continents. Beringia emerged from what is now the Bering Sea as ocean levels dropped during the Ice Age. It disappeared again as the weather warmed, the waters rose, and the ice began to recede.

A series of mass extinctions, involving 33 to 35 species of animals, occurred at about the time the Ice

Age ended. The species that disappeared from North America during this time included woolly mammoths, mastodons, glyptodonts (huge armadillo-like creatures), mylodons (immense ground sloths), saber-toothed cats, and birds with 25-foot (7.6-m) wingspans. Most scientists believe that the wetter climate following the Ice Age helped produce great forests that replaced much of the grazing land that supported large fauna. Because these creatures were too big to forage in the dense forests, they eventually died out.

What we know today as a "normal" climate reflects an infinitesimally short period in the history of the planet. The earth is now in what is called an "interglacial period" during which glaciers have retreated far to the north, but such periods have occurred thousands of times in the history of the planet, as have periods of intense glaciation. No one knows how long this period of moderate temperatures will last.

See also: Beringia; Mammoths.

FURTHER READING

Barton, Miles, et al. *Prehistoric America: A Journey through the Ice Age and Beyond*. New Haven, CT: Yale University Press, 2002.

Incan Civilization

Culture group that rose to power in the fifteenth century C.E. in what is now Peru. At its height, the people of the Inca empire performed remarkable feats of engineering and controlled more than 350,000 square miles (900,000 sq km), from modern Ecuador to modern Chile.

Little is known about the early years of the Inca people. Beginning in about C.E. 1100, however, they began to attack neighboring groups from their capital city of Cuzco. During the reign of their *Sapa Inca,* or king, Pachacuti, beginning in about 1438, the Inca came to dominate a kingdom that was about the size of the 13 American colonies and included almost the whole of the Andes Mountains. After Pachacuti's death, his sons continued in their father's footsteps, conquering lands as far north as Ecuador, as far south as Chile, and as far east as Argentina and Bolivia.

POLITICAL AND SOCIAL ORGANIZATION

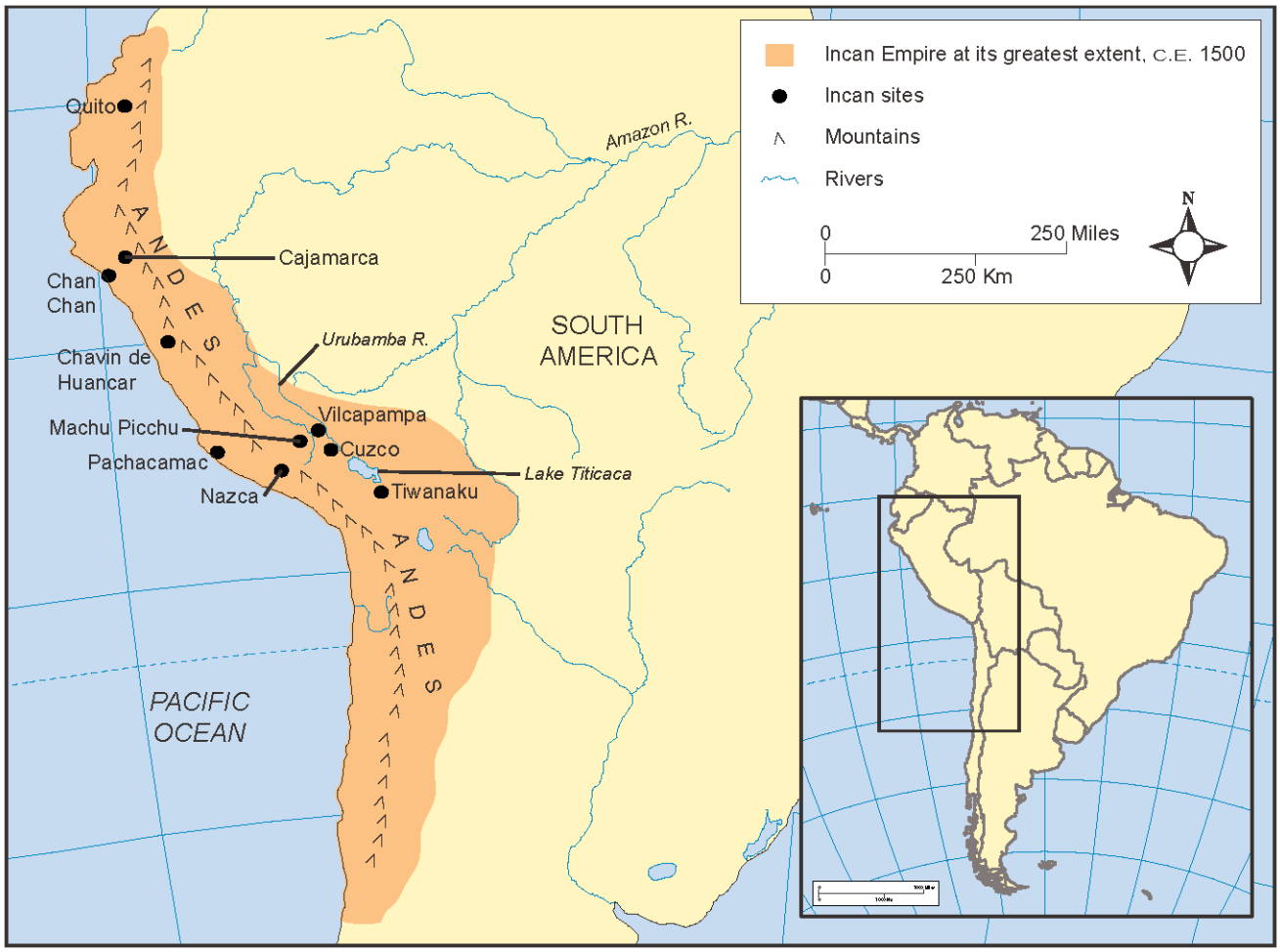
The Inca were capable administrators who devised a complex political system in order to rule their vast holdings. The Sapa Inca was the political and religious head of the tribe, and he was believed to be the son of the Inca's major deity, the sun god Inti. Although he had many mistresses, the Sapa Inca married his sister in order to produce an heir to the throne who was descended from the sun god on both sides.

Incan society was strictly **hierarchical**. Occupying ranks on the social ladder below the **aristocratic** class were priests, army commanders, and craftspeople. The vast majority of the people farmed the land in order to provide enough food to feed the population. As the empire grew, there were opportunities for conquered peoples to rise to administrative positions, but only pure-blooded Inca could hold the most important governmental positions. The children of conquered rulers were brought to Cuzco in order to be raised in the Incan religion and culture, which increased social stability in this diverse empire. Still, there were rebel groups who continually resisted Incan dominance.

The Inca called their empire *Tawantinsuyu,* or "Land of the Four Quarters." Indeed, the empire was divided into four administrative sections, each ruled by a relative of the Sapa Inca. Each quarter

INCAN EMPIRE, CA. C.E. 1500

Archeological discoveries have revealed that the Inca Empire was vast. At its peak, in about C.E. 1500, it stretched 2,500 miles (4,025 km) through South America, from the southern border of present-day Colombia south into Chile and east from the Pacific Coast into the Amazonian rain forest.



was subdivided into progressively smaller units. Under each of the four provincial governors, called *apos,* were ten district governors, who oversaw groups of about 10,000 peasants. Below these were village leaders who ruled groups of about 1,000 people, foremen who supervised 100 people and, at the lowest level, an official who was responsible for 10 individuals.

AGRICULTURE

The Inca were skilled farmers who managed to grow large food surpluses on mountainous land that was difficult to irrigate and plow. The Inca did not have the wheel or draft animals, so the land was tilled using stone tools, metal hoes, and digging sticks. On this land, Incan farmers grew 240 varieties of potato, as well as corn, beans, peppers, peanuts, cotton, squash, and cassava.

In practice, all Incan farmers were tenants on the land. The Sapa Inca owned all the land, and each peasant was obligated to give a portion of his crop to the emperor. In addition, the government imposed a labor tax on the people called a *mit'a.* This tax required most people to work part of the

INCAN CIVILIZATION, CA. C.E. 1100–1572

ca. C.E. 1100 Inca begin to attack neighboring groups in order to expand their territory

C.E. 1438 Incan emperor Pachacuti ascends to the throne, ruling a kingdom as large as the original thirteen American colonies

C.E. 1471 Pachacuti dies but his sons continue to acquire territory

C.E. 1523 Spanish conquistador, Francisco Pizarro, arrives in Peru

C.E. 1525 Incan Emperor Huyana Capec and his heir both die

C.E. 1525–1532 Civil war disrupts Incan empire, pitting brothers against each other for throne

C.E. 1532 Atahualpa emerges as victor in civil war and executes his brother

C.E. 1532 Francisco Pizarro captures and executes Altahualpa; except for a rebel group, Incan empire falls to the Spanish

C.E. 1572 Spanish forces capture Vilcabamba, the last holdout of the Incan empire

year for the government in the building of cities and roads or in mining gold and silver.

PUBLIC PROJECTS

It was for public projects such as roads, in fact, that the Inca are most admired. Over mountainous terrain, without the use of the wheel, the Inca built a vast system of stone roads. It is estimated that the Inca had more than 10,000 miles (16,000 km) of roads crisscrossing their vast territory. Communication in the empire was dependent on these roads and a group of trained runners who carried messages from one part of the empire to another, often running 140 miles (225 km) in a single day. Along the roads, the Inca built rest houses called *tambos* where travelers could spend the night. In addition to roads, the Inca built remarkable rope suspension bridges over deep chasms in the mountains. These bridges were so sturdy that one survived for 500 years.

Inca palaces, temples, and fortresses are also remarkable for their precision and beauty. Typically, Inca builders used huge limestone or granite blocks that they had to transport many miles, often up steep mountains, without the use of draft animals or wheels. The stones were laid on top of one another and then sculpted to fit. So talented were the Inca architects that even a leaf of paper will not fit between the stones. The Inca also built many cascading fountains and artificial waterfalls. The city of Machu Picchu has a system of 16 fountains that still function today.

CONQUEST

In 1523, the Spanish explorer Francisco Pizarro led an expedition to the coast of Peru. There, he learned that the Inca had tremendous stores of gold and silver. Pizarro returned to Spain and asked for permission to conquer the native peoples. He was granted that permission, returned to the west coast of South America in 1532, and began battling coastal tribes. He eventually worked his way to the Inca capital of Cuzco with only 200 men and 40 horses.

Pizarro encountered a fractured empire just emerging from civil war over the succession to the Inca throne. He captured and executed the new Sapa Inca, Atalhualpa, and installed a puppet emperor, Manco Capac. When the Spanish began to fight among themselves over the immense riches of the Inca, Manco led an unsuccessful revolt. He and his followers retreated to the mountains north of Cuzco. Spain finally conquered this final Inca stronghold in 1572.

The Inca people, however, have survived to this day. Particularly in rural areas, many people still speak Quechua, the language of the Inca, and they still eat many of the same foods, play the same music, and share the same religious beliefs as their ancestors.

Shown here is an Incan quipu from the fifteenth century C.E. This device was made of colored string and knots and allowed certain highly trained interpreters to keep track of resources such as llamas and agricultural products. (Werner Forman/Art Resource, NY)

LINK IN TIME

The Quipu, An Incan Computer

The Inca never developed a written language or a system of mathematics, yet they were able to rule a vast and complex empire. One tool that helped them keep track of the many details involved in ruling the empire was the *quipu*. The quipu was a system of knotted cords used by the Inca as a kind of data bank that could be read only by specially trained Incan accountants called *quipucamayocs,* or "quipu authorities." A long string, often made of llama wool, represented the concept or idea of which the Incas wanted to keep track. Suspended from the long string, were a series of shorter strings, of different colors, knotted in various places. A single quipu could have as many as a thousand strings suspended from it. The number and color of the strings, the knots, and the spaces between strings all had meaning to the quipucamayocs. The quipus were used to keep track of populations, crops, and items kept in storehouses.

Although some anthropologists believe that the quipus were actually a system of writing in which the knots represented words and ideas, most feel it was a device that allowed the interpreter to remember a complicated message. It may even be that only the person who made the quipu could read it.

See also: Agriculture; Art and Architecture; Language and Writing; Machu Picchu.

FURTHER READING

Daltroy, Terence N. *The Incas (The Peoples of America)*. London: Blackwell, 2003.

Davies, Nigel. *The Ancient Kingdoms of Peru*. New York: Penguin, 1998.

Hemming, John. *The Conquest of the Incas*. Orlando, FL: Harvest/HBJ Books, 2003.

Inuit

See Thule Tradition.

L

Language and Writing

Scholars estimate that, before the arrival of Christopher Columbus in the fifteenth century C.E. , Native Americans spoke between 1,800 and 2,000 different languages, including 300 in North America, 300 in Mexico and Central America, and 1,400 in South America and the West Indies. Many of these languages have died out and are no longer spoken by anyone; others are spoken by fewer than 1,000 individuals.

Today, only Navajo and Cherokee in North America are spoken by significant numbers of people. In Central America, the Nahuatl and the Mayan languages are still spoken by many, and in South America, the Quechuan language family and Tupí Guaraní have many speakers. Only the people of **Mesoamerica** had true writing systems.

CHARACTERISTICS OF SPOKEN NATIVE AMERICAN LANGUAGES

Native American languages are not only numerous, they also are very different from one another and provide fertile ground for linguistic study. The language spoken by the Inuit of Greenland, for example, has only 17 phonemes, or individual sounds; by contrast, Navajo has 47. (English has 40.) Some Native American languages have nasalized vowel sounds similar to French; some use rising and falling tones to distinguish meaning, as does the Chinese.

In English, speakers string several individual words together to form sentences. In many Native American languages, speakers combine a number of elements—or **morphemes**—many of which have no meaning in themselves—into a single "word" with a complex meaning. Such languages are known as **polysynthetic**. In Yu'pik Inuit, for example a speaker might say, "*tuntussuqatarniksaitengqiggtuq*," which means something like "He had not yet said again that he was going to hunt reindeer." Edward Sapir, one of the most famous linguists to study Native American languages, often cited this utterance from the Paiute language: "*wiitokuchumpunkurüganiyugwivantümü*," which means "they who are going to sit and cut up with a knife a black female (or male) buffalo."

Some Native American languages use a grammatical device known as "switch reference." In English, the sentence, "She walked a long way and she rested" is somewhat ambiguous, since it is not clear if the person who walked is the same person who rested. In the Hopi language, however, the verb form changes if the person changes, so the same sentence in Hopi would not be ambiguous.

Several Native American languages assign gender to nouns, as in French, Spanish, and German. Others, such as those in the Algonquian group,

EVOLUTION OF AMERICAN LANGUAGE AND WRITING

ca. 1200 B.C.E. The Olmec civilization of Mexico develops the beginnings of a written language

ca. 700 B.C.E. Probable date for the beginning of writing among the Maya of Central America

400 B.C.E. Earliest known carved stone calendar made by the Maya

250 B.C.E. Earliest known writing in Mayan script

C.E. 1200–1250 The earliest known Mayan book, now known as the Dresden Codex, is written

ca. C.E. 1500 Mayan books now known as the Paris, Grolier, and Madrid Codices are written

ca. C.E. 1530 Spanish conquerors burn Mayan books

C.E. 1554–1560 The *Popol Vuh,* the sacred book of the Maya, is recorded in Roman characters

C.E. 1950 Russian ethnologist Yuri Knorsov first proposes that Mayan script is partially phonetic—that some of the glyphs represented sounds

C.E. 1962 Mayan hieroglyphs are cataloged

C.E. 1965 The Grolier Codex is discovered by José Saenz in Mexico

classify nouns as animate or inanimate. Some languages have separate forms for singular and plural nouns; others use the same form for both. (English does both; most words have singular and plural forms, but words like "sheep" are used for both singular and plural, using only context to make the distinction.)

Other Native American languages have an "animacy hierarchy," in which all nouns are ranked from humans through animals and objects, with abstractions—such as friendship or loyalty—at the bottom of the hierarchy. In practice, this means that if a human being is the object of a sentence and an animal the subject (as in "The horse kicked the boy"), the word for "boy" must precede that for "horse" in the sentence structure. Navajo is one Native American language with an animacy hierarchy.

So different and fascinating are Native American languages that the linguists Edward Sapir and his student Benjamin Lee Whorf developed a hypothesis about the interplay between language and the perception of reality as a result of studying the Hopi language. In *Language, Thought, and Reality* (1956), Whorf asserted that the language a person speaks affects thought and perception—independent of other elements of the culture in which one is raised. He notes, for example, that "Hopi, with its preferences for verbs, as contrasted to our own liking for nouns, perpetually turns our propositions about things into propositions about events."

Hopi does not have the subject-object distinctions that characterize English. Where an English speaker might say, "There is a house over there," or "That is my house," a Hopi speaker would say, "It houses." Such a difference in language, says Whorf, will inevitably color thought, such that a Hopi speaker may see the world as a place entirely different from that perceived by an English speaker. In fact, Whorf says, Hopi may be a better language than English in which to discuss modern physics and such concepts as Einstein's theory of relativity.

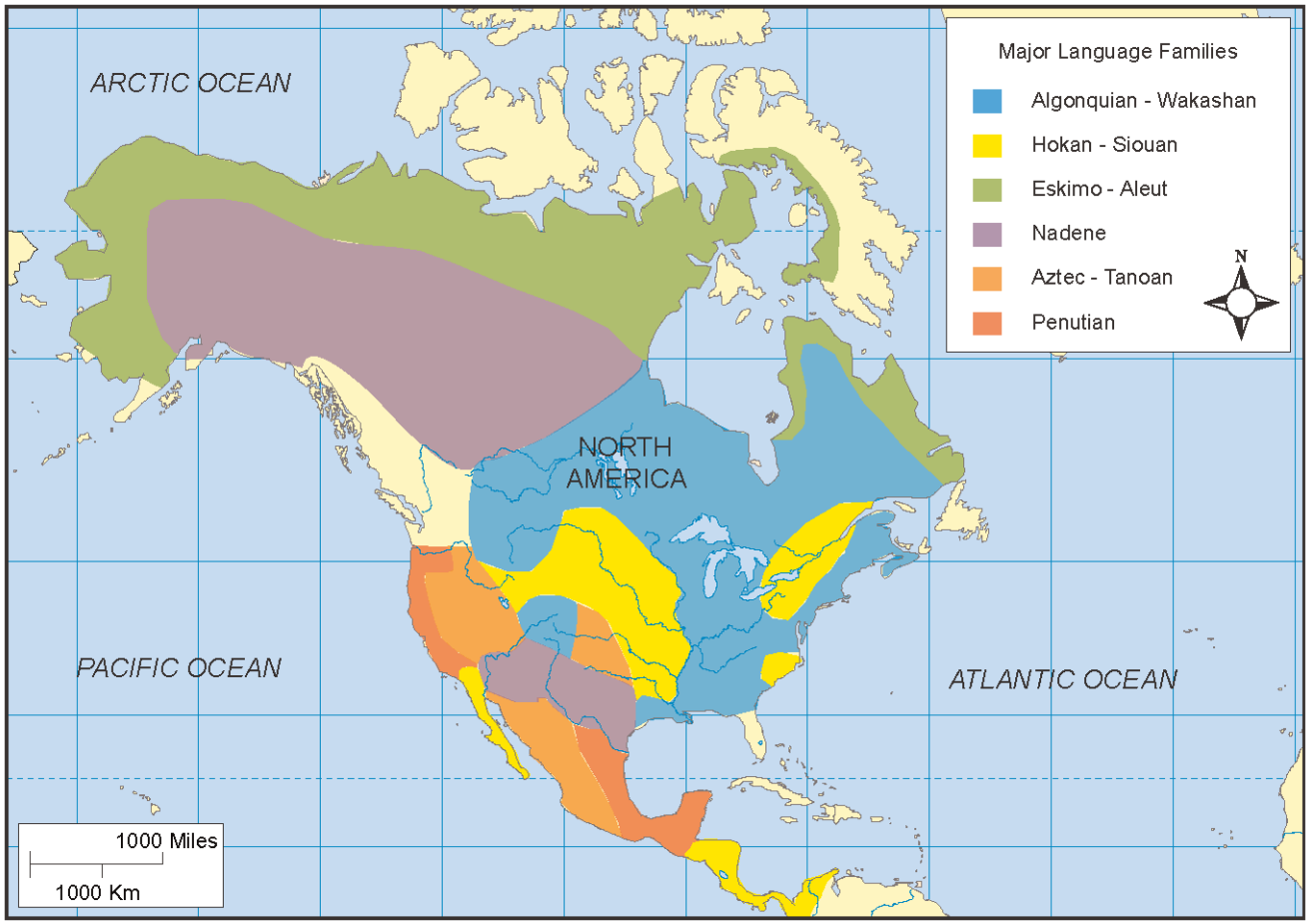
ORIGINS OF NATIVE AMERICAN LANGUAGES

Although historians still assume that Native Americans came to the Americas thousands of years ago, no Native American language is clearly derived from an Old World language. According to scholars at the Smithsonian Institution Anthropology Outreach Office, no one has yet been able to find any words in any Asian languages that are similar to Native American words. Thus, for now, the origin of Native American languages remains unknown.

Although many Native American languages have become extinct, they have left their legacy in

MAJOR LINGUISTIC GROUPS OF THE ANCIENT AMERICAS

This map shows the six major language families of North America, where 300 different languages were spoken prior to European contact in the fifteenth century C.E. Another 1,740 languages, from 34 different language families, were once spoken in Central and South America.



many place names and words used every day. These include such names as Alaska, Alabama, Arizona, Connecticut, and Canada, and such everyday words as raccoon, coyote, squash, tomato, potato, tapioca, chocolate, tobacco, succotash, barbecue, hurricane, hammock, canoe, moccasin, totem, pow-wow, and many others.

NORTH AND CENTRAL AMERICAN LANGUAGE GROUPS

There are many different methods of classifying Native American languages, but one that is still widely accepted is that proposed by Sapir in 1929. Sapir divided Native American languages north of Mexico into six major families: Eskimo-Aleut, Algonquian-Wakashan, Nadene, Penutian, Hokan-Siouan, and Aztec-Tanoan.

The Eskimo-Aleut language family was spoken in Greenland, Canada, Alaska, parts of the United States, and Siberia. The Aleut language is spoken today by fewer than 400 people. The Eskimo languages are divided into two subgroups: Yupik and Inupiaq-Inuktitut. Yupik today has about 13,000 speakers, while Inupiaq-Inuktitut has about 100,000 speakers.

The Algonquian-Wakashan language family was at one time spoken throughout North America.

Algonquian tongues encompassed more than 50 separate languages including Algonquian, Arapaho, Cheyenne, Delaware, Kickapoo, Micmac, Penobscot, and Shawnee. Also in the family were Coeur d'Alene, Okanogan, Pend d'Oreille, Puyallup, Tillamok, Nootka, and Kitamat. Most Algonquian-Wakashan languages were polysynthetic. Today these languages are spoken by fewer than 150,000 individuals throughout the United States and Canada.

The Nadene and Penutian language family incluldes Athabascan, Haida, and Tlingit, which were spoken in the Pacific Northwest. It also includes several languages spoken in California as well as Mexico and Central America.

The Hokan-Siouan family includes languages that were spoken throughout North America: Seminole, Chickasaw, Creek, Iroquois, Yuma, Seneca, Osage, and Crow. Some of these languages can even be found in Mexico and Central America. Many of these languages are **aggluntinative**, which means that word elements are often mixed to form an additional word; German and Dutch have many words that are formed this way. The word *Kontaktlinsenverträglichkeitstest* in German, for example, means "contact-lens compatibility test."

Aztec-Tanoan languages are spoken from the northwestern United States to Mexico and Central America. Many of these languages are polysynthetic. This group includes Nuahatl, the language spoken by the Aztec, an ancient civilization of what is now Mexico. Mayan is part of the Penutian language family and is still spoken today by more than four million speakers.

SOUTH AMERICAN AND WEST INDIAN LANGUAGE GROUPS

Linguists have spent many years studying North American language groups. Much less time and effort has been spent studying other language groups of the Americas, so much less is known about these languages. Part of the reason for this is the sheer number of languages that existed outside of what is now the United States. For example, at the time of European contact in the sixteenth century C.E., more than 1,000 different languages in 34 language families were spoken in South America alone. By comparison, today there are only 21 language families in all of Africa, Europe, and Asia combined.

MESOAMERICAN WRITING SYSTEMS

Of all of the languages spoken in the Americas before the arrival of Columbus in C.E. 1492, only those in Mesoamerica had true writing systems. Many Mesoamerican writing systems resemble one another and share certain characteristics, such as the use of signs called **glyphs**. The glyphs were intricate and highly pictorial, easily recognized representations of the object or animal they are intended to represent. For example, the sign for "jaguar" looks like a stylized jaguar. There are also, however, many glyphs that are comprised of geometric shapes such as triangles, circles, and spirals.

In the Mayan language, glyphs were originally used more like pictures than word-symbols. A group of glyphs would signify a complex idea, but it did not matter in what order they were "read." Later, the glyphs were grouped into glyph boxes and then into a two-column layout, which was read from left to right. When text was grouped into three columns, the first column would be read from top to bottom and the next two from left to right.

Like the Egyptian system, Mayan writing evolved from glyphs that were intended to represent simple objects into glyphs that were added to other glyphs to modify their meaning into glyphs that represented individual sounds. To date, about 800 different glyphs have been identified. Many of the glyphs have more than one meaning.

It is thought that the Olmec people developed the beginnings of a written language in about 1200 B.C.E. and that the Maya began using written language in about 700 B.C.E. The earliest carved stone calendar of the Maya dates from about 400 B.C.E, and the earliest known writing in Maya script dates from 250 B.C.E.

Most Mayan writing depicted histories of a people or places, genealogies, or conquests. They were carved into stone or wood, onto buildings and free-

This image shows a small part of "Newspaper Rock," located near Canyonlands National Park in Utah. The rock includes an early form of writing from the Fremont, Anasazi, Navajo, and Anglo cultures. (Daniel Gotshall/Taxi/Getty Images)

standing stones called *stelae,* and onto altars. Mayan scribes also painted glyphs on ceramics and walls, and wrote books that were made of a single long sheet of paper folded accordion style.

There are in existence today only four books written by the Maya, named after the cities where they are now kept, or in one case, after a club that once owned the manuscript; they are the Dresden **Codex**, the Paris Codex, the Madrid Codex, and the Grolier Codex. It is believed that the Dresden Codex was written between C.E. 1200 and 1250 and that the other three were written in about C.E. 1500. There are so few examples of Mayan books in existence because Spanish conquerors burned all the Mayan books they could find beginning in about C.E. 1530. The Dresden, Paris, and Madrid codices were known to scholars from the nineteenth century C.E., but the Grolier Codex was not discovered until C.E. 1965. One other Mayan book remains, the sacred text of the *Popol Vuh,* but the surviving copy is not written in **hieroglyphs**; it is a transcription into Roman characters done in about C.E. 1554.

Historians and linguists still have much to do when it comes to the study of Mesoamerican languages and writing. It was not until C.E. 1950, for example, that scholars realized the script was partially phonetic—that is, that some of the glyphs represented sounds—and not until C.E. 1962 that all the hieroglyphs were catalogued. Only recently have archeologists begun to believe that a series of drawings uncovered in Tenochtitlán may actually be a writing system, which would make it the first in the Americas.

LINK TO PLACE

Rock Drawings and Petroglyphs in the Southwestern United States

Perhaps the earliest forms of writing in the New World were drawings, called pictographs, and rock carvings, called **petroglyphs**, that were executed by early hunter-gatherers in what is now the southwestern United States. The drawings and carvings were created over a period of many thousands of years, from about 5000 B.C.E. to about C.E. 1700. Some of the rock carvings are easy to decipher. A petroglyph in southeastern Colorado, for example, depicts a herd of deer or antelope and a group of stick figures, which is no doubt a depiction of hunting. Others are more difficult to interpret.

Other petroglyphs have been interpreted as attempts on the part of **shamans** to reproduce the experience of trances. Rock art found near the Pecos River in west Texas, for example, shows human-like figures with arms that appear to be stalks of corn; this may be an attempt to show the transformation of a shaman into the sacred corn plant. Other figures are geometric, including zigzag lines, chain-like figures, spirals, circles, and doughnut-shaped objects.

Many of these mysterious ancient pictures are in danger today. They are exposed to natural forces and continue to erode. But humans have also inflicted damage. Simply touching the drawings can cause them to deteriorate. Some people have inflicted and continue to inflict intentional damage, shooting at the drawings or painting graffiti at the sites.

See also: Archeological Discoveries; Aztec Civilization; Mayan Civilization.

FURTHER READING

Campbell, Lyle. *American Indian Languages: The Historical Linguistics of Native America*. New York: Oxford University Press, 2000.

Mithun, Marianne et al., eds. *The Languages of Native North America*. Cambridge: Cambridge University Press, 2001.

L'Anse aux Meadows

Site, located in present-day Newfoundland, Canada, of the only authenticated ancient Viking settlement in North America. Two Norse tales, *The Saga of the Greenlanders* and *The Saga of Erik the Red*, tell how Viking sailors led by Norwegian explorer Leif Eriksson discovered a new land to the west of Greenland, a place Eriksson called Vinland, where he arrived in ca. C.E. 1000. Modern scholars have recognized that Vinland was actually in modern-day North America.

For years, historians and **archeologists** searched unsuccessfully for evidence to support the tales told in the Norse sagas. Finally, in C.E. 1960, while searching for evidence of a Viking presence in Canada, Norwegian historian Helge Ingstad came across some fascinating information. George Decker, a local fisherman, told Ingstad about rectangular mounds he had seen in a field near L'Anse aux Meadows, a cove at the tip of the Great Northern Peninsula in northern Newfoundland. Ingstad briefly explored the site

and concluded that the mounds were the remains of Viking-style log houses. Columbus, it appeared, was not the first European to travel to the New World.

In C.E. 1961, Ingstad returned to L'Anse aux Meadows with his wife, archeologist Anne Stine. Over the next two years, excavations uncovered the foundations of eight structures, including a smithy for processing iron and a bathhouse similar to those found in Greenland. Fireplaces with ember pits, a style common in Greenland, were also found, as well as a bronze pin, of the kind Vikings commonly used to fasten their cloaks, and an Icelandic stone lamp.

Among the most important finds at L'Anse aux Meadows was a tiny stone wheel, called a spindle whorl, used for spinning wool. This find, along with a bone needle and a pair of scissors, seemed to confirm the claim of the sagas that women were present at the site.

Archeologists have also discovered bogs nearby that were the source of iron that the Vikings smelted into nails. In the bogs, they also uncovered old broken nails and planks of the sort Vikings used to build their ships. Certainly, one function of the settlement at L'Anse aux Meadows was to repair and refit ships that made the voyage from Greenland.

Although a total of more than 800 **artifacts** have been found at the site, one thing that was *not* found in L'Anse aux Meadows was the grape. This fact is significant because Leif Eriksson named his settlement Vinland, after the abundant grapes growing wild in the region. According to the sagas, he returned to Greenland with his ship laden with timber and grapes. However, grapes have never grown in Newfoundland, which suggests that L'Anse aux Meadows is not the settlement described in the sagas. Grapes do grow farther south in what is now New England, leading historians to speculate that the actual settlement was in New England and that L'Anse aux Meadows was merely a staging site from which explorers and settlers ventured south and west. Unfortunately, no evidence exists of a Viking settlement anywhere other than L'Anse aux Meadows.

Some scholars have speculated that the "vin" in Vinland could also mean "grass" or "farm," and suggest that the word connotes an area of grassy pasture. These conjectures have been dismissed by most experts, using complicated linguistic arguments, and the scholarly consensus seems to be that the exact location of Vinland is still a mystery.

See also: Archeological Discoveries; Vinland.

FURTHER READING

Ingstad, Helge, and Anne Stine Ingstad. *The Viking Discovery of America: Excavation of a Norse Settlement in L'Anse aux Meadows, Newfoundland*. New York: Checkmark Books, 2001.

M

Machu Picchu

Ancient stone city (ca. C.E. 1460–1532) built by the Incas in the Andes Mountains, near their capital city of Cuczco. Scholars speculate that Machu Picchu was built by the emperor Pachacuti Inca Yupanqui (C.E. 1438–1471) as a rural religious retreat for himself and other nobles and priests. Because the Inca had no written language, however, no one really knows for certain who built the city or for what purpose.

Machu Picchu, often referred to as "lost city of the Incas," was rediscovered in C.E. 1911 by Yale **archeologist** Hiram Bingham, who was searching for the Incan city of Vilcapampa. Machu Picchu, located at the top of a mountain ridge 7,800 feet (2,400 m) above sea level, is invisible from below and difficult to reach. When Bingham arrived, Machu Picchu was overgrown with vegetation.

This panoramic view shows the beautiful ancient Incan city Machu Picchu, located high in the Peruvian Andes. Lost to history for centuries because of its isolated location, the city was rediscovered by Hiram Bingham in C.E. 1911. (Ed Simpson/Stone/Getty Images)

LINK IN TIME

Machu Picchu Today

Machu Picchu, hidden 2,000 feet above the Urubamba River in the Peruvian Andes, escaped destruction by Spanish conquerors and was remarkably well preserved when it was rediscovered by Hiram Bingham in 1911. Unfortunately, modern tourism poses a greater threat to the site than did the conquistadors. The soil on which the city was built is shallow, and when it is compressed by the tramping of millions of tourists' feet, the buildings begin to shift. Tourists also leave trash along the Inca trails, trample indigenous plants, and place in further jeopardy already endangered animal species such as the spectacled bear.

In addition, the area surrounding the ancient city has become overrun with tourist attractions—hotels, shops, and parking lots—which mar the natural beauty and mystery of the cloud-covered mountain top. A plan to build cable cars up the mountain was stopped by preservationists, who argued that a ride such as one might find in a modern amusement park did not belong in an ancient and sacred site.

The government of Peru has been slow to act to preserve Machu Picchu because tourism generates so much income. A recent master plan recommended that no more than 2,500 tourists be allowed to visit the site each day, but the plan has met considerable opposition from commercial interests.

Several groups are now working to preserve Machu Picchu. *Progama Machu Picchu* is a conservation organization that is working to strengthen the administration of the Machu Picchu sanctuary and to protect the local flora, fauna, and environment. *Yachay Wasi* (which means "House of Learning" in Quechua) represents the native groups who live in the area surrounding Machu Picchu. They work to ensure that Machu Picchu, which they recognize as a sacred place, is protected as such. With the help of these and other groups, Machu Picchu may survive another 500 years, its beauty intact.

Beneath the vegetation lay a city made of hewn stone that was once home to about 1,000 people. It survived nearly intact because the Spanish troops who conquered the Incan Empire never knew of its existence.

Machu Picchu covers about five square miles (13 sq. km) and is divided into three distinct sections—one for agriculture, one for homes, and one for religious ceremonies. The builders of the city used the existing stone outcroppings as part of many of the structures, which seem to grow naturally out of the landscape. The rocks from which the structures were built were quarried nearby, and no two are the same size; the largest weigh as much as 50 tons. They are fitted together without mortar so tightly that a knife blade cannot be slipped between them.

The agricultural section of Machu Picchu consists of terraces and irrigation canals. These fields grew enough food to support the population. There are nearly 200 houses in the residential section, most of which were built of stone, and they once had thatched roofs. In the religious area, there are several temples, the most beautiful and distinctive of which is the "Temple of the Sun," a circular tower of the finest stonework. Since the Inca did not typically build anything in the shape of a circle, this building is quite unusual. Another structure has been nicknamed the "Temple of the Three Windows," after the three trapezoid-shaped windows that adorn one wall. The Inca did not usually incorporate windows into their buildings, and no one knows why they were added to this one.

Until recently, Machu Picchu was the most visited tourist site in Peru, but some worry that tourists may cause damage to the site. In C.E. 2000, the Pe-

ruvian government began limiting the number of visitors to Machu Picchu. The following year, geologists warned that the rear slope of the fortress was slowly sliding downward, putting the site in danger of landslide.

See also: Archeological Discoveries; Incan Civilization; Religion.

FURTHER READING

Burger, Richard L., and Lucy C. Salazar, eds. *Machu Picchu: Unveiling the Mysteries of the Incas.* New Haven, CT: Yale University Press, 2004.

Maize

The Native American word for corn, from the Taino word "mahis." Native Americans taught the Pilgrims, who arrived in the Americas in 1621, to grow maize, which allowed these newcomers to survive in the new land.

The word "corn" is Germanic and was used to refer to any edible grass seed, such as millet, sorghum, barley, rye, or oats. Europeans typically used the term "corn" to describe whatever grain was the most prevalent wherever they lived. In England, for example, "corn" referred to wheat. In the Taino language, "maize" meant "source of life," and Columbus and other Spanish explorers who first encountered this American plant used the Taino word to refer to it. Other Native American groups had different words for what we now call corn. The Aztec called it "centli," the Maya, "ixim," and the Zapotec, "rxoa." Many of these words have the same sense as the Taino word, suggesting that maize is the source of life.

Maize originated as a wild grass (Teosinte) in Mexico. Wild maize was quite different from modern corn, in that each kernel was tiny and encased in a husk, much like wheat or oats. To develop the "ear" of corn as we know it, Native Americans must have spent centuries collecting, selecting, and planting seed, beginning about 7,000 years ago. Primitive ears of corn were only a few inches long and had a mere eight rows of kernels. Over thousands of years of cultivation, the size of the cobs and kernels grew. By 1400 B.C.E., maize was cultivated throughout what is now Mexico, then made its way north and was disseminated throughout what is now the United States.

Native Americans in the northern parts of the Americas were cultivating maize by C.E. 900, but they had to make many adaptations to the plant in order to accommodate the shorter growing season. For example, like other grasses, maize grows in segments, with ears forming at the juncture of each segment. By planting the seeds from the lowest segments of plants, Native Americans were able to develop variants that produced more ears of corn at the lower parts of the plant, thus shortening the growing season.

Ancient maize was not at all like the sweet corn that we eat directly off the cob today; it was a hard grain, similar to modern hard field corn. Native Americans ground maize into flour, which they then made into corn cakes, called "apopone" or "ponop," and a porridge called "samp" by the Algonquians. They also used the husks to make dolls, mats, cloaks, and moccasins and the cobs to make pipes. And they brewed a form of beer from corn.

Native American farmers developed ingenious agricultural methods that increased yield and made farming easier. For example, they planted maize, beans, and squash together (a combination often referred to as the "three sisters"), using the corn stalks to support the beans, and the space needed between the corn rows for squash, which also kept down weeds. They planted the corn seeds along with fish, which served as fertilizer and increased yield.

This sculpture of the Aztec Corn God Centeotl underscores the importance of maize to the Aztec. Farmers often made blood sacrifices to Centeotl as they planted their crops in order to ensure a good harvest. (The Bridgeman Art Library/ Getty Images)

Today, of all grains grown in the world, corn is by far the most productive, feeding far more people per acre than any other similar plant.

See also: Agriculture.

FURTHER READING

Nies, Judith. *Native American History: A Chronology of a Culture's Vast Achievements and Their Links to World Events*. New York: Ballantine Books, 1996.

Mammoths

A now-extinct species of elephant that once roamed North America and was hunted by early Native Americans. The mammoth provided ancient peoples not only with food but also with hides—from which they made clothing and shelter—and bones, which they used to make weapons and other tools.

About 1.8 million years ago, in search of new feeding grounds, the southern mammoth made its way to what is now Alaska from Asia by walking across the Bering Strait during periods when ocean levels were low enough to allow the passage. Then, about 1.2 million years ago, the Steppe mammoth arrived from Siberia, followed by the woolly mammoth that evolved in Eurasia and came to North America about 165,000 years ago. The Columbian and Imperial mammoths, which, along with the woolly mammoth, were the most common species in North America, descended from the original steppe mammoth.

The woolly mammoth was about 9 feet (2.74 m) tall, with long fur and curved tusks. The Columbian mammoth was 16 feet (4.87 m) tall, one of the largest elephants that ever lived. It was probably not fur covered, in this respect resembling the modern elephant. The Imperial mammoth was about 14 feet (4.26 m) tall and was fur covered.

The woolly mammoth is the best known of all the prehistoric **megafauna**, or extremely large animals, perhaps because several perfectly preserved specimens have been found frozen in the ice of Siberia and Alaska. Thousands of fossils, especially fossilized teeth and tusks, have also been found throughout North and Central America. Scientists dubbed these mammoths "woolly" because of their distinctive coats of long dark coils of hair.

The woolly mammoth was well adapted to live in very cold climates. Underneath its furry coat, the hairs of which were sometimes 2 to 3 feet long (0.6 to 0.9m), was a three-inch (7.7-cm) layer of fat. Its distinctive curved tusks were used to dig through snow to find the 400 to 700 pounds (130

A nineteenth-century C.E. drawing of the now-extinct woolly mammoth that once roamed the plains of North America and was hunted by the earliest Paleo-Indians. (Oxford Science Archive/HIP/Art Resource, NY)

to 320 kg) of grass and other plant material that it ate every day.

The variety of fauna in the Americas was comparable to that of Africa today, with many different species of large mammals. The woolly mammoth, at 9 to 11 feet (2.7 to 3.5 m) tall, was not the largest of the mammoth species, some of which were 16 feet (4.9 m) tall. Its ears and tail were much smaller than today's elephants, to prevent heat loss.

At the end of the last Ice Age, about 11,000 years ago, many species, including mammoths, saber-toothed cats, tapirs, the giant beaver, and mastodons, went extinct. Scholars provide varying **historical interpretations** of this evidence. Some experts believe that many of these creatures were particularly susceptible to being killed by hunters because they had no natural fear of humans, having lived hundreds of thousands of years without threat from predators. By the time they learned to fear humans, they had been hunted to extinction. Other experts speculate that the mammoths died from diseases brought by humans.

Recent discoveries, however, point toward changes in the climate as the cause of the mass extinction of these creatures. Mammoths were uniquely suited to live on a steppe environment such as existed in North America until the end of the last Ice Age, a dry, treeless plain covered with short grasses and shrubs. As the climate warmed, the air became drier. Plant life changed and eventually the mammoths died out.

See also: Archeological Discoveries; Beringia; Clovis; Hunter-Gatherers; Ice Age.

FURTHER READING

Frison, George C. *Prehistoric Hunters of the High Plains.* 2nd ed. Philadelphia, PA: Academic Press, 1991.

Mayan Civilization

A loose confederation of city-states that flourished in present-day Guatemala, Belize, Honduras, El Salvador, and southern Mexico from approximately 2600 B.C.E. to C.E. 900. The Mayan was the only **Mesoamerican** civilization to have developed a sophisticated writing system.

The history of Mayan civilization is generally divided into three periods: Preclassic (2000 B.C.E.–C.E. 250), Classic (C.E. 250–900), and Postclassic (C.E. 900–1500). This practice of viewing cultures or civilizations in terms of broad **eras** of its history is called **periodization**. Most of the art, architecture, and accomplishment associated with Mayan civilization occurred during the Classic Period.

RAIN FOREST CULTURE

Mayan civilization, unlike other major ancient civilizations, was not an urban one. That is, although the Maya constructed large and beautiful cities, such as Tikal in about C.E. 600, **archeologists** believe that these were ceremonial centers, not places where large groups of people lived and worked. It appears that most Mayans lived on small farms and came to the city only for religious celebrations and ceremonies.

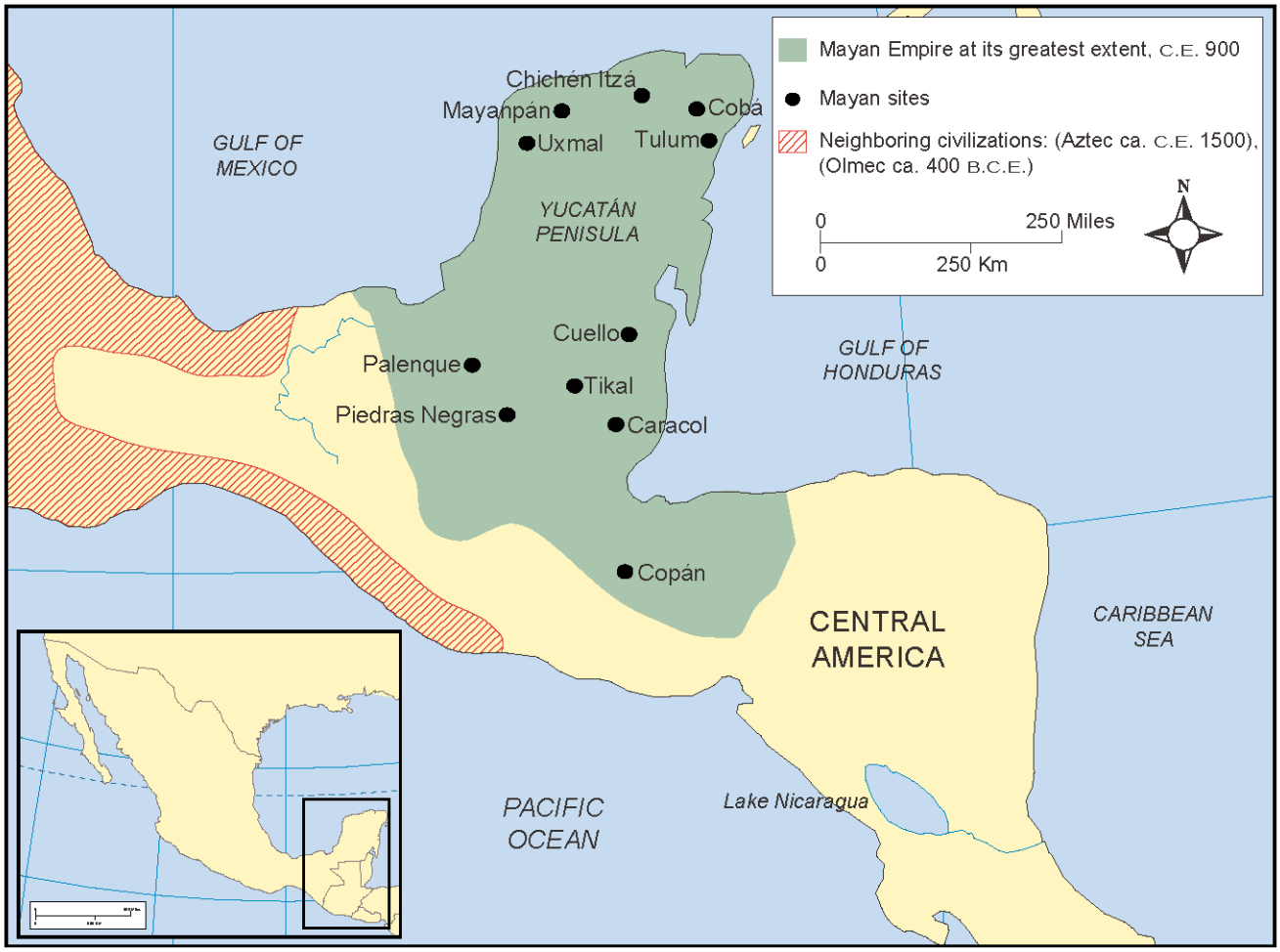
Mayan civilization, in fact, is the only civilization known to have emerged in the hot humid conditions of the rain forest. Most ancient cities grew as a result of intensive agriculture, which produced surplus food with a minimum of labor. However, the soil in tropical rain forests is poor and easily depleted, requiring great effort to grow enough food to support a large population.

RELIGION

Religion was the unifying fact of Mayan civilization. Mayan cities with their immense pyramids, temples, palaces, and ball courts, were built in order to worship and placate Mayan gods. The Maya believed

MAYAN EMPIRE, CA. C.E. 900

The Maya ruled what is now southern Mexico, Guatemala, Belize, Honduras, and El Salvador. This map shows some of the major cities of the empire, which were ceremonial centers rather than places where people lived and worked. Possibly because of some religious crisis, although scholars do not know for sure, the Maya began to abandon most of these great centers around C.E. 900.



that human blood had to be offered to nourish the gods, and kings and priests would often cut their genitals with jade knives or pull thorn-covered ropes through their tongues to draw blood for the gods. The Maya also practiced human sacrifice. A king could not inherit the title from his father until he had captured an enemy in battle. Priests sacrificed these captives on altars high atop pyramids by cutting into the chest and removing the beating heart.

Mayan ball games, too, were seen as having religious significance as contests between the forces of good and evil. The losers were often executed by having their hearts torn out. Some losers were even tied and rolled down the steps of a pyramid.

MAYAN WRITING

Possibly influenced by the Olmec, the Maya developed the only native system of writing in the Western Hemisphere. Their system, somewhat similar to the Egyptian, is comprised of **hieroglyphs**, or picture writing. The Maya used more than 800 **glyphs**. Like Egyptian hieroglyphs, some Mayan symbols stood

The Temple of the Warriors and the Thousand Columns in Chichén Itzá in Mexico is so named because of the carvings of warriors on the front and the supporting pillars of the structure. The artwork shows the influence of ancient Toltec culture on the Maya. (SEF/Art Resource, NY)

GREAT LIVES

Pakal the Great

During an excavation in the Mayan Temple of Inscriptions in Palenque, Mexico, Alberto Ruz of Mexico's National Institute of Archaeology and History noticed a stone slab that had holes drilled into it. He also noticed that the chamber's walls seemed to continue beyond the floor. He realized that there must be another room below the one in which he was standing. The ancient Mayan builders had sealed off the room below and inserted the final slab by drilling holes in it and lowering it into place with ropes.

When, in C.E. 1952, Ruz excavated the lower chamber, he discovered a huge underground chamber containing what he assumed to be the tomb of a great ruler. However, archeologists were puzzled by the inscription they found suggesting that this was the tomb of Pakal the Great, who had lived to be 80 years old. The skeleton in the sarcophagus seemed to be that of a man of about 40.

The confusion arose because the skeleton's teeth were not as worn as those of an elderly man. This is probably because, as a member of the nobility, Pakal would have eaten a softer diet than many of his subjects. Other anthropologists have suggested that people who lived long lives tended to have younger bones than their contemporaries in the first place, which might explain the discrepancy between Pakal's advanced age and his youthful teeth and bones.

MAYAN CIVILIZATION, 2600 B.C.E.–C.E. 1531

ca. 2600 B.C.E. Date of earliest evidence of Mayan culture

2000 B.C.E.–C.E. 250 Preclassic Period of Mayan civilization

C.E. 250–900 Classic Period of Mayan civiliczation

ca. C.E. 600 Mayan city of Tikal is largest city in Mesoamerica

C.E. 899 Tikal abandoned

C.E. 900 Other Mayan cities, except those in the Yucatán Peninsula, abandoned

C.E. 900–1500 Postclassic Period of Mayan civilization

C.E. 1000 Toltec influence evident in Mayan city of Chichén Itzá

C.E. 1221 Peasants revolt in Chichén Itzá

C.E. 1224 Chichén Itzá abandoned

TURNING POINT

Mayan Astronomy

The Maya were skilled astronomers who used their abilities in this area for both practical and religious purposes. For example, during the Classic Period, the Maya developed three calendars: a 260-day sacred calendar, a 365-day solar calendar, and a third calendar that measured a 20-year cycle. The Maya developed a complex system of coordinating their calendars, and their priests used this system to determine when to plant corn, when to hold particular ceremonies, when to crown kings, and when to go to war.

Mayan astronomers accurately predicted solar eclipses and the future positions of celestial objects using only a forked twig and the unaided eye. In addition, many Mayan buildings are perfectly aligned with the cardinal compass directions, and many seem designed to allow priests to identify **solstices** and **equinoxes**.

for sounds and, thus, had some of the characteristics of a true alphabet. Mayan writing is difficult to decipher, since there is no way to tell if a particular glyph stands for an object or a sound. To date, scholars have deciphered about 85 percent of Mayan glyphs.

DEMISE

Beginning in about C.E. 899, the Maya abandoned Tikal and many other cities, except for those in the Yucatán Peninsula. No one knows precisely why, although many scholars attribute it to a religious crisis of some sort. This speculation arose because the Maya did not completely disappear; rather, they simply abandoned their ceremonial cities.

The religious crisis may have been precipitated by crop failures. If the populace saw a **cause-and-effect relationship** between natural disasters and the actions of priests and kings, they may have quickly lost faith in these leaders. Food may have been scarce because of overfarming, or climate conditions may have changed. There is evidence of a prolonged drought in Mexico and Central America at the time, which may have led to famine.

In the Yucatán Peninsula, Mayan cities such as Chichén Itzá were not abandoned; in about C.E. 1000, Toltec influence can be clearly seen in the architecture and art of Chichén Itzá. Whether the transition was peaceful or the result of conquest is unclear, but in any case, a combined culture arose with Chichén Itzá as the central city until 1221, when a peasant revolt caused the center of power to shift elsewhere. The city was abandoned in C.E. 1224. The Spanish conquered the city in the sixteenth century C.E.

See also: Agriculture; Art and Architecture; Language and Writing; Religion; Technology and Inventions; Toltec Culture.

FURTHER READING

Demarest, Arthur, and Rita P. Wright. *Ancient Maya: The Rise and Fall of a Rainforest Civilization*. Cambridge: Cambridge University Press, 2004.

Freidel, David, and Linda Schele. *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: Harper, 1992.

Mississippian Cultures

Term used to describe the Native American Mound Building cultures that occupied the midwestern, eastern, and southeastern United States from about C.E. 900 until the arrival of Europeans in the sixteenth century C.E.

Mississippian culture is characterized primarily by what **archeologists** call "intensive maize agriculture," that is, farming, particularly of corn, on a large scale. The name Mississippian stems from early belief that the culture arose in the flood plains of the Mississippi River Valley. However, recent excavations suggest that its origins lie farther east and south, in modern-day Florida, Alabama, and Georgia.

In addition to maize, the people of the Mississippian cultures were successful at growing beans, squash, and other food crops. **Historical research** indicates that the diet of the Mississippian people also included nuts (hickory nuts and acorns) and meat (deer, turkey, raccoon, and bear), as well as fish, birds, and turtles. The abundant food production allowed the Mississippian people to construct permanent settlements and establish a complex social organization.

MOUND BUILDING

Most major Mississippian settlements contained platform mounds, large rectangular earthworks topped with wooden temples or palaces. For this reason, Mississippians are also referred to as "Mound Builders." Among the most famous of these mounds is one now known as "Monk's Mound" in Cahokia, Illinois. These earthworks were remarkable feats of construction, especially considering the fact that the people who built them had neither beasts of burden nor wheeled vehicles. Individuals moved mountains of earth in baskets that held about 60 pounds (27 kg) of soil each.

Archeologists believe that the mounds were constructed over a period of about 200 years. If a chief died, his palace might be burned, covered with earth, and a new palace erected on top of the original one. Over the years, the mounds grew to tremendous proportions. For example, Cahokia, near modern-day St. Louis, Missouri, was the largest of the urban centers constructed by the Mississippians; at its height it was home to more than 20,000 individuals. The base of the temple mound at Cahokia measures 740,000 square feet (68,000 sq. m), making it the largest earthwork in North America. Cahokia, in fact, covers an area one quarter greater than does the Great Pyramid at Giza.

SOCIETY

Clearly, such massive construction projects required a centralized government capable of commanding the work of hundreds of people. That Mississippian society was complex and **hierarchical** is also clear from burial sites such as those found at Cahokia in Illinois. Lower-status people are interred with only a few cooking utensils, whereas the

THE MOUNDS OF MISSISSIPPIAN CULTURE

The Mound Building cultures, also known as Mississippian, occupied large portions of the midwestern, eastern, and southeastern United States. These cultures relied heavily on maize agriculture and built large settlements that are distinguished by huge earthwork mounds. Among the most famous of the ancient Mississippian mounds are those found in Cahokia (Illinois), Etowah (Georgia), Moundville (Alabama), and Spiro (Oklahoma).

graves of the ruling elite contain many rare and valuable objects. Accounts of early settlers indicate that Mississippian chiefs were called "Great Suns" and were often elaborately dressed in cloaks of feather and fur. Succession was **matrilineal**, meaning that a chief would be succeeded by his sister's son.

Little is known about the religion of the Mississippians because they left no written records. However, burial customs in which people were interred with objects to assist them in the next life suggest that these people, like so many others throughout the world, paid special reverence to ancestors. Paintings and sculptures depicting reproduction suggest that fertility was especially valued. Many paintings also indicate that the Mississippians also revered bravery in battle.

Artifacts uncovered at Cahokia, at Etowah Mounds in Georgia, Moundville in Alabama, Spiro Mounds in eastern Oklahoma, and other Mississippian sites also reveal that this culture had an extensive trading network. Most of the major settlements

were in river valleys, and traders plied the waterways in dugout canoes, carrying shells, copper, pearls, silver, chert (a kind of rock used for making arrowheads), and other goods from one urban area to another.

ART AND TECHNOLOGY

Mississippian culture is also distinguished by fine pottery and stoneware. Mississippian pottery, which was probably made exclusively by women, is distinguished from earlier ware by the use of ground shells as a tempering agent to make the pottery less breakable. Because the pottery was stronger as a result of adding ground shells to the clay, potters could craft more elaborate shapes. Ceramic jars and bowls in the shape of people and animals, called **effigies**, are characteristic of Mississippian culture. Mississippian sculptors also made beautiful stone pipes in the shape of birds, animals, and people.

Mississippians hold a special place in the **history of science and technology** in ancient America. They were the first Native Americans to use the bow and arrow. The Mississippians were so effective with that weapon that they were able to drive away Hernando de Soto and his Spanish forces during their exploration of the region during the mid-sixteenth century C.E. In fact, Mississippian warriors shot arrows with such force and precision that they pierced the Spaniards' metal armor.

DEMISE

Evidence suggests that the large Mississippian settlements were in crisis beginning in about C.E. 1300, before the arrival of Europeans. No one knows precisely what happened, but archeologists have speculated that Mississippian agricultural techniques may not have been efficient enough to support growing populations, or that the soil around the large settlements might have been deprived of nutrients by overfarming. The construction of palisades or tall wooden fences around some settlements suggests that war might also have been a factor in the decline of Mississippian culture.

With the coming of Europeans, disease reduced Native American populations, and the reintroduction of the horse to the North American continent by Spanish explorers encouraged some groups to return to a hunting and gathering way of life. Eventually, even the descendants of the Mississippians—such as the Cherokee and Choctaw, the Miami, and the Seminole—no longer remembered that their ancestors had constructed the great earthworks and regarded them with as much amazement as European settlers did. It was many years before archeologists realized that the mounds were, in fact, built by Native Americans and not a mysterious vanished race of "Mound Builders."

See also: Cahokia; Mound Builders; Great Serpent Mound; Mound Builders.

FURTHER READING

Cobb, Charles. *From Quarry to Cornfield: The Political Economy of Mississippian Hoe Production*. Tuscaloosa: University of Alabama Press, 2000.

Emerson, Thomas E., and Barry Lewis, eds. *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*. Chicago: University of Illinois Press, 2000.

Smith, Bruce D. *Mississippian Emergence*. Washington, DC: Smithsonian Institution Press, 1990.

Mound Builders

A term first coined in the eighteenth century C.E. to denote the ancient Native American people who created massive earthen mounds and other earthworks in the eastern and central present-day United States. As these cultures left no written records, the mounds are the only surviving evidence of these ancient peoples.

When Europeans first came to North America, they encountered massive earthwork mounds. As the country was settled and people moved westward, they found more and more of these earthen structures. The European colonists had no **historical understanding** or appreciation of native cultures, so they assumed that these mounds could not be the work of Native Americans. As a result, they called those who crafted the structures, simply, "Mound Builders." In fact, it was not until C.E. 1894 that Cyrus Thompson of the Smithsonian Institution determined that Native Americans had constructed the mounds.

The mounds were built over several periods in Native American history and by four different cultures, or loosely connected groups who came together for trade and religious purposes. These cultures included the Poverty Point Culture (fl. 1700–700 B.C.E.), the Adena Culture (fl. 1100 B.C.E.–C.E. 200), the Hopewell Culture (fl. 200 B.C.E.–C.E. 400), and the Mississippian Culture (fl. C.E. 800–1550). Although these cultures lived in different times and places, and had different domestic economies, they all built mounds.

Some of the mounds were burial sites; others were platforms for the construction of residences and temples; and still others were **effigy** mounds, designed to resemble an animal or person. From what these peoples left behind, in and around the mounds, archeologists have drawn conclusions about their ancient cultures.

POVERTY POINT EARTHWORKS

One of the earliest large-scale mound complexes in North America is located in Poverty Point, Louisiana. The people of the Poverty Point Culture who built the mounds were primarily hunter-gatherers, people who move from place to place following herds and harvesting wild plants. Usually such peoples do not build permanent settlements. Archeologists speculate that the Poverty Point people tended to return to the same hunting sites each year and constructed the mounds at one of their

The Rock Eagle effigy mound in Eatonton, Georgia, was constructed by people of the ancient Mississippian Mound Building culture about 2,000 years ago. The oldest mound ever discovered, it is made of rock in the shape of an eagle and is 120 feet (36.6 m) from head to toe and 102 feet (31 m) from wingtip to wingtip. (Tami Chappell/America 24–7/Getty Images)

GREAT LIVES

Frederick Ward Putnam

Frederick Ward Putnam is often cited as the father of American archeology for his work in excavating and documenting sites in Ohio such as the Great Serpent Mound and Fort Ancient. Putnam was born in Salem, Massachusetts, in C.E. 1839, and studied anthropology under the scholar Louis Agassiz. In 1875, Putnam was appointed curator of the Peabody Museum of Harvard University and later professor of archeology and ethnology there. Putnam also helped to found the Field Museum of Natural History in Chicago.

From about 1880 to 1895, Putnam excavated and wrote on many Mound Building sites in the Midwest and was able to acquire access to the Great Serpent Mound for the Peabody. He developed methods of excavating mounds that help to preserve the sites while allowing archeologists to delve into their treasures. So important were these contributions that one contemporary anthropologist, Frank Hamilton Cushing, lauded that Putnam was "certainly the foremost among American archaeologists."

favorite locations. The mounds were begun about 1200 B.C.E., just at the time when the Poverty Point people were beginning to cultivate and store plants, though they were still hunter-gatherers. No one is sure how many people lived at Poverty Point, but some estimate as many as several thousands. There is evidence that the people of Poverty Point traded over long distances and that they had a fairly sophisticated stone-working industry.

The Poverty Point earthworks consist of six concentric semicircular earthen ridges. To the west of the ridges is a large mound, which is 60 feet (18 m) high and 566 feet (175 m) long. From the top of this mound, one can see the spring and fall **equinoxes** across the center of the circular ridges.

MOUND BUILDING CULTURES

The Adena culture that lived in the Ohio River Valley from 1100 B.C.E. to C.E. 400 built elaborate burial mounds in what are now Ohio, Kentucky, West Virginia, Indiana, Pennsylvania, and New York. Like the Poverty Point Culture, the Adena were primarily hunter gatherers who returned to the same hunting grounds year after year.

Among their most remarkable structures is Grave Creek Mound, located at Moundsville, West Virginia, which, at 62 feet high (19 m) and 240 feet (73 m) in diameter, is the largest conical burial mound in the United States. Grave Creek Mound was constructed between 400 B.C.E. and C.E. 200. Excavations of the mound indicate that it was used as burial site.

Following the decline of the Adena Culture, the Hopewell tradition emerged, which was in many ways a continuation of the earlier culture. In general, the Hopewell burial grounds were larger, there were more mounds, and the grave goods were indicative of a more complex culture. The Hopewell culture also built effigy mounds, earthen constructions in the shapes of animals such as birds and bears. At the Effigy Mounds Park in Iowa, there are 31 such mounds in a variety of different shapes.

The people of the Mississippian Culture are also called temple Mound Builders. While they built conical burial mounds like the Hopewell and Adena, they are best known for enormous platform mounds, which often served as the base for elite housing, temples, and other public buildings. Cahokia, near St. Louis, Missouri, is a Mississippian site that may have been the home to more than 20,000 people at one point in its history.

No one really knows what happened to the Mound Building cultures. They may have declined as a result of overpopulation, disease, or warfare, or they may have been decimated by drought or famine. It is possible that the Hopewell were the ancestors of the Algonquians, a Native American

group of the Northeast, and the Mississippian cultures were the ancestors of the Creek, a Native American confederacy that lived in what is now Georgia, and the Choctaw, a Native American group of the Southeast.

See also: Adena; Agriculture; Archeological Discoveries; Cahokia; Culture Groups; Great Serpent Mound; Hunter-Gatherers; Mississippian Cultures.

FURTHER READING

Milner, George F. *The Moundbuilders: Ancient Peoples of Eastern North America*. London: Thames and Hudson, 2004.

Myths and Legends

Native American myths and legends typically seek to explain the origins of the universe and the mysteries of life. These tales are usually divided into four major categories: creation stories, hero stories, trickster stories, and stories about the end of the world.

CREATION STORIES

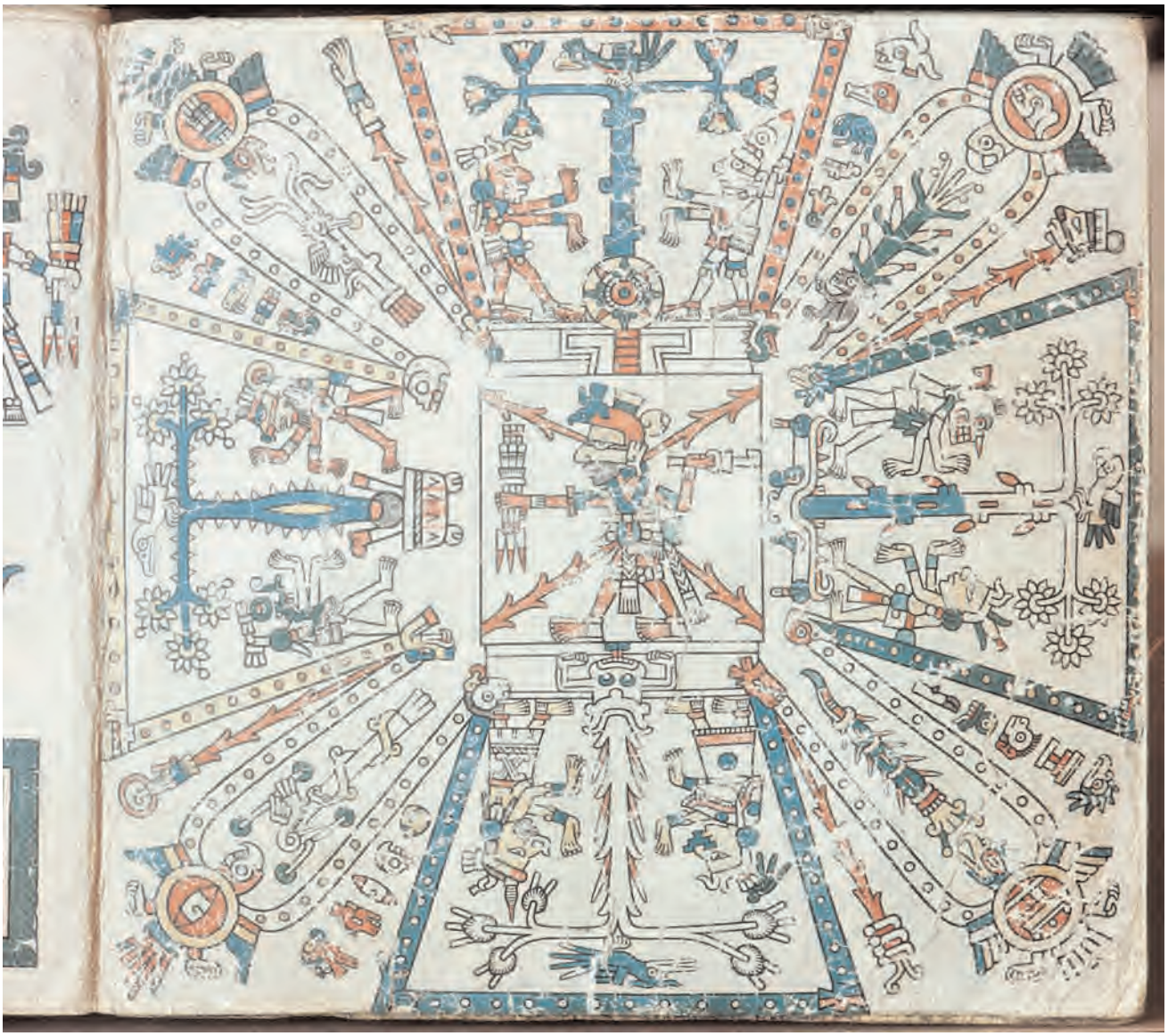
Many Native American creation myths reveal common themes, such as that of the universe emerging from a watery beginning. One Yuma (a native group of the southwestern part of North America) myth begins, "There was only water—there was no sky, there was no land, only nothingness." A Cherokee (a native group originally from the southeastern part of North America) myth begins, "Well, in the beginning also, water covered everything. Though living creatures existed, their home was up there, above the rainbow, and it was crowded." In many stories, a creature dives or is sent down to gather mud from which to shape the earth.

Other creation legends involve twins, one of whom is good, one evil. These stories embody a perception of the duality of the universe, the eternal battle between opposites. In a Yuma myth, for example, the twins Kokomaht and Bakotahl vie to create the earth and humans. In the battle between them, Bakotahl creates an evil whirlwind. Kokomaht stops it, but a small part escapes him. "In it were contained all the sicknesses that plague people to this day."

Unlike the creation myths of most Native American culture groups, the creation story of the Maya is written down in a book known as the *Popol Vuh*. It is a complex story that tells not only of the creation of the earth, but also of the first humans and the natural order of things. At first there is nothingness. Then the Heart-of-the-Earth-and-Sky calls forth the earth. It emerges but there is no sunrise. Then Heart-of-the-Earth-and-Sky begins to experiment with creating humans. He tries to make them of clay, but these creatures disappoint him, so he lets them be washed away by the rain. He makes a new crop out of wood, but destroys them because they are foolish; a few escape his wrath and become monkeys.

Next Heart-of-the-Earth-and-Sky calls on other gods to help him and makes four men from corn. These men are pleasing in many ways, but Heart-of-the-Earth-and-Sky worries that they are too smart and may upset the balance of nature, so he causes them to sleep and forget some of their knowledge. He creates four women, and together the eight humans watch the first sunrise. Humans, the story suggests, are an essential part of creation, but they must know their limitations.

Interestingly, many Native American myths include stories of the destruction of the earth, sometimes by flood. An Apache (a native group of southwestern North America) myth, for example, which is quite similar to the Mayan creation story, portrays the clay and wooden humans being destroyed by flood, so the gods could start over.



This depiction of the creation of the universe is from the *Codex Ferjervary-Mayer,* an ancient Mixtec book. The Mixtec were an ancient American people who were conquered by the Aztec. At the center of the image is the fire god, who is being fed on sacrificial blood. (Werner Forman/Art Resource, NY)

HERO STORIES

Many Native American hero stories tell of those who sacrifice themselves for the good of the group. One of the most poignant of these tales is the Penobscot (a native group of northeastern North America) story of the Corn Mother. Corn Mother is the daughter of Kloskurbeh, "the All-Maker." She marries and brings forth the human race. When the people become hungry, she tells her son to kill her and her sons to drag her body across the land and to burn her bones. From her flesh comes corn to feed the people and from her bones comes tobacco. The Corn Mother's husband reminds the people to "take good care of [her] flesh, because it is her goodness become substance. Take good care of her breath, because it is her love turned into smoke. Remember her and think of her whenever you eat, whenever you smoke this sacred plant, because she has given her life that you might live. Yet she is not dead, she lives: in undying love she renews herself again and again."

In other hero tales, the protagonist must battle against monsters and demons. Such battles, of course, can be found in the myths and legends of many countries.

Glooscap, a deity and hero of the Passamaquoddy, Micmac, and Miliseet, for example, has to help humans battle the water monster, who is greedy and steals all the water for himself. The monster is a formidable adversary, but he is no match for Glooscap, who has superhuman strength and can adjust his height so that he is always bigger than his opponent. Glooscap squeezes the monster, from whom water pours to refill the streams and lakes. So tightly does he squeeze the water monster that the monster shrinks and becomes what is known today as a bullfrog.

Many heroes have mysterious or extraordinary beginnings. Rabbit Boy of the White River Sioux (a native group of southwestern North America) begins as a blood clot that a rabbit kicks around and imbues with the power of motion. Another hero of a Brule Sioux myth, Iyan Hokshi, or Stone Boy, is born to a young maiden as a result of her eating a rock. Like many Native American heroes, Stone Boy is extraordinarily strong and smart at a very young age. "Day after day he grew, ten times faster than ordinary infants, and with a more perfect body."

The Hero Twins of Mayan mythology follow much the same pattern of mysterious birth and precocious strength that many North American hero stories do. In one tale, Hun Hunahpu, a Mayan fertility god, is killed and his skull hung from a tree. A young virgin stops nearby and the skull speaks with her and spits into her hand. As a result, she gives birth to the hero twins, Hun-Apu and Xbalanque. Hun-Apu and Xbalanque are famous for their skills as ball players; in fact, they even play ball with the Lords of Death and defeat them by substituting a squash for the ball. It is in honor of these twins that the Maya and other **Mesoamerican** cultures played their ball games.

TRICKSTER STORIES

While stories of heroes often reveal what a culture reveres, trickster stories—which are popular in nearly every culture—reveal what makes a culture laugh. Very often, what makes people laugh is comeuppance—situations in which small yet sly creatures defeat those who are rich or powerful or simply full of themselves.

Tricksters embody not only playfulness but also the creative impulse, spontaneity, and the joy of living. They break the rules, defy taboos, and make trouble whenever and wherever they can. In many Native American myths, Coyote is both trickster and creator. The Raven, the Blue Jay, Iktome, the spider, and other animals also play the role of the trickster in some Native American cultures.

LINK TO PLACE

Trickster Stories in the Americas and Africa

As in North America, tricksters—-gods or spirits, often in animal form, that symbolize the human tendency toward mischief and jokes-—are very popular in Africa. Tricksters are sometimes portrayed as small animals who, through cunning, outwit much larger and stronger creatures. For example, in a Mayan tale, Rabbit tells Coyote that the moon's reflection in a pond is a huge wheel of cheese. He convinces Coyote to try to drink all the water in order to get to the cheese. Coyote drinks until his stomach hurts before he realizes he has been fooled.

Among the most famous of African tricksters is Anansi the spider, whose stories are told by the Ashante of West Africa. In one story, Anansi causes a fight between two humans by wearing a hat that is red on one side and white on the other. The friends argue about the hat's color until Anansi shows up to explain the trick. In both of these stories, the "underdog," the smaller, weaker creature, outwits the larger and presumably smarter creature.

In a story from the Kalapuya (a native group of northwestern North America), frogs have captured all the water on earth and force people to pay to drink. Coyote pays for a drink; however, he takes a very long drink, and while his head is underwater, he digs through a dam allowing the water to flow into the valley and create rivers and waterfalls. Other trickster stories are similar to this, in that the trick leads to a benefit for humans. In a story told by the Shasta people (a native group of what is now northern California), Ground Squirrel tricks Obsidian Man and steals sharp stone arrowheads from him to give to the people, who up to that point had to hunt with bark arrowheads.

STORIES OF THE END

Native Americans tell many different stories about death and the end of the world. For example, there is a prophesy among the Hopi that when the Blue Star Kachinas, a specific group of spirits, dance in the plazas, the end of the world is approaching.

In a Blackfoot (a native group of what is now Montana) story, the creator makes a woman from mud. When she comes into being, she asks if she will live forever or go back to being mud. The old man replies that he will throw a buffalo chip into the water; if it floats, he says, people will die but come back to life four days later. The woman, newly created and knowing nothing about the nature of the world, chooses to throw in a stone, saying that if it sinks, humans will die. Unfortunately, she is so naïve that she does not understand that a small stone weighs more than a buffalo chip. Thus, death comes into the world.

The Mayan system of belief held that by the time of their civilization, the world had already been created and destroyed four times. The last time the world was destroyed, it "rained so hard, the sun fell down." Based on their religious beliefs and astronomical observations, they believed that the world would end a fifth time; in fact, they had already calculated a date: the winter **solstice**, December 21, 2012. Many other Mesoamerican cultures shared this belief that the world would end on a specific date, including the Aztec.

The retold myths that belong to the Native Americans of North, Central, and South America reveal the ideas and beliefs of ancient American cultures. Although common themes emerge, the stories also bring to life the many distinct value systems of ancient Native American nations.

See also: Aztec Civilization; Culture and Traditions; Mayan Civilization; Religion.

FURTHER READING

Dixon-Kennedy, Mike. *Native American Myth and Legend*. New York: Sterling, 1998.

Erdoes, Richard, and Alfonso Ortiz. *American Indian Myths and Legends*. New York: Pantheon, 1984.

Montejo, Victor. *The Bird Who Cleans the World and Other Mayan Fables*. Translated by Wallace Kaufman. Willimantic, CT: Curbstone Press, 1992.

Tedlock, Dennis, ed. *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. New York: Simon and Schuster, 1985.

Nazca

A series of unexplained prehistoric drawings carved into the earth on the arid Nazca plain, near the Pacific Ocean in southern Peru. The figures, which extend more than 200 square miles (518 sq km), include hundreds of long straight lines, geometric figures, and 70 representations of people and animals.

Archeologists estimate that the lines were etched into the desert floor some time between 200 B.C.E. and C.E. 600. Drawings incised in rock are called **petroglyphs**; the Nazca Lines, because they are on the ground, are called geoglyphs.

The composition of the soil on the Nazca plain made possible the creation and preservation of the lines. The soil is not sandy; instead, it is hard-packed red earth covered with red gravel. The ancient Nazca made their drawings by removing the stones and scraping away the top layer of soil to expose the lighter soil underneath. In some cases, they piled the red stones beside the light-colored lines and made them part of the design. The longest of the straight lines is nine miles (14.5 km) long and the largest of the individual figures is nearly 900 feet (274 m) long. The lines have been preserved for hundreds of years because of the extremely dry conditions of the area, where rainfall averages only 20 minutes a year. A lack of wind on the Nazca plain also helps to preserve the lines.

The figures depicted at Nazca include lizards, spiders, monkeys, llamas, dogs, and 18 different kinds of birds. The lines that comprise the drawings are about 11 inches (28 cm) deep and from 1 to 10 feet (.3 to 3 m) wide. The Nazca lines are especially mysterious because, when seen from the ground, they look random. Only when flying above the desert floor can one distinguish the various shapes. In fact, archeologists were not aware of the lines until C.E. 1927, when a pilot noticed what appeared to be runways. The fact that the lines make sense only when seen from above led many people to speculate that prehistoric people with crude tools could not possibly have created the designs.

Still, most scientists and historians today are convinced that the lines were created by the Nazca people who lived nearby and made pottery with designs similar to those on the drawings. The question that remains to be answered is why they went to so much trouble to draw pictures on the ground. One theory, advanced by German mathematician Maria Reiche, is that the lines align with the stars in some way, serving as a kind of calendar. Another theory, advanced by anthropologist David Johnson, is that the lines are maps of underground waterways. In C.E. 1977, author Jim Woodman speculated that the lines demonstrate that ancient cultures had the technology to fly. Woodman and hot-air balloonist Julian Nott tested this idea

by constructing a hot-air balloon from materials that would have been available 1,500 years ago. The Condor I, made of fibers and reeds, actually flew for a short period of time before crash landing. However, there is no concrete proof to support Woodman's theory.

Although scholars may never know their precise meanings, most believe that the drawings have some religious significance. Canadian astronomer Robin Edgar has suggested that the drawings may be responses to an unusual series of solar eclipses that occurred during the time when the lines were drawn. He notes that when the sun is totally eclipsed, it appears to be a giant eye looking down from the sky—the "Eye of God." This may explain why the drawings were made so as to be visible from above. Another theory suggests that the lines were "walking temples." Art historian Alan Sawyer notes that "Most [of the] figures are composed of a single line that never crosses itself, perhaps the path of a ritual maze." During religious ceremonies, then, people may have walked through the drawings, much as one might walk through a labyrinth or maze and, in so doing, absorbed the spirit of the creature represented by the drawing.

Another mystery associated with the lines centers around the fact that many of them are miles long and perfectly straight. It seems impossible that ancient peoples with crude tools could have constructed something so precise. In C.E. 1983, University of Kentucky professor Joe Nickell and his father copied one of the Nazca drawings, a giant condor, in a farm field in Kentucky, using only stakes and rope—technology that would certainly have been available to the Nazca. According to Dr. Persis B. Clarkson, an archeologist and geoglyph expert at the University of Winnipeg, constructing the lines did not require "difficult technology." All the creators needed, he said, was "the will."

There are other notable geoglyphs in Egypt, Malta, the United States, Bolivia, and Chili, but none has as many drawings or covers as great an area as do the Nacza lines. These ancient desert drawings are beautiful, but their significance for ancient peoples may remain a mystery.

See also: Great Serpent Mound; Language and Writing; Religion; Technology and Inventions.

FURTHER READING

Aveni, Anthony. *Between the Lines: The Mystery of the Giant Ground Drawings of Ancient Nasca*. Austin: University of Texas Press, 2000.

———. *Nasca: Eighth Wonder of the World?* London: British Museum Press, 2000.

Hadingham, Evan. *Lines to the Mountain Gods: Nazca and the Mysteries of Peru*. Norman: University of Oklahoma Press, 1988.

Morrison, Tony. *Pathways to the Gods: The Mystery of the Andes Lines*. Chicago: Academy Chicago, 1988.

Silverman, Helaine, and Donald A. Proulx. *The Nasca*. London: Blackwell, 2002.

Norton Tradition

Name given by **archeologists** to cultures of the western Arctic, which invented kayaks, float harpoons, and other tools that helped in the exploitation of marine resources. The Norton tradition (1000 B.C.E.–C.E. 800) is an outgrowth of the Artic Small Tools tradition (ASTt), which prevailed from about 2750 B.C.E. to about C.E. 800 from southwestern Alaska to Greenland. These cultures are known for their small and delicate projectile points and blades, which tended to be no more than 2 inches (5 cm) long. These tools are also referred to as **microlithic**, which means "small stone."

The people of the ASTt were the first to spread across the North American Arctic, as far as Greenland. They subsisted by hunting caribou and fish such as salmon, which come into rivers from the sea in order to spawn. They used a bow and arrow and a toggling harpoon—that is, a harpoon in which the blade was left in the prey while the shaft was withdrawn.

The people of the Norton tradition differed from other groups of the small tools tradition in that they were able to develop effective and efficient techniques for hunting sea mammals, such as seals and whales, as well as land mammals. They invented boats made of skin, called *kayaks* and *umiaks*. A umiak is similar to a kayak but it has no decking, is wider and deeper, and is capable of carrying heavy loads. Umiaks were used for hunting—-particularly of bowhead whales—as well as for moving people and possessions from one hunting camp to another.

Norton groups also invented the float harpoon, which allowed hunters to let go of the line attached to a harpoon once the head was embedded in the prey. The line was attached to a float made of inflated sealskin, which the wounded animal would drag until it was exhausted. At that point, the hunter could move in for the kill.

Perhaps because of their more efficient methods of hunting, people of the Norton tradition were able to live in more or less permanent settlements near the sea, leaving only in the summer to live in temporary fishing or hunting camps. The homes of the Norton tradition were partly underground, with the entrance tunnels dug lower than the house to trap the cold. The homes were heated by large lamps that burned whale blubber.

The Norton tradition can be divided into three stages, or **eras**, each marked by distinctive pottery and artwork. The first stage, Choris (1000 to 500 B.C.E.), is known for its fiber-tempered pottery—that is, pottery made of clay mixed with organic fibers—which had linear designs. The second stage, Norton (500 B.C.E. to C.E. 800), is known for check-stamped pottery (in which a checkerboard design is stamped on the surface of the pottery with ivory paddles), stone lamps, and slate harpoon and arrowheads. The third stage, Ipiutak, which overlapped the Norton stage by several hundred years, is known for its ornate and beautiful harpoon heads and ivory carvings of animals and humans. Around C.E. 800, the Norton tradition was superseded by the Thule tradition, which invented much of the technology still used today by the Inuit peoples of the Arctic.

See also: Thule Tradition.

FURTHER READING

McGhee, Robert. *Ancient People of the Arctic*. Vancouver, Canada: University of British Columbia Press, 2001.

Olmec Civilization

The first complex culture to exist in **Mesoamerica**, whose people inhabited land bordering the Gulf of Mexico from about 1200 to 400 B.C.E. Most scholars believe the Olmec to be of Siberian origin, as are other Native American peoples.

The Olmec were probably among the Paleo-Indians who crossed into North America from Siberia along a land bridge known as Beringia about 11,000 years ago. They moved southward, eventually settling along the Gulf of Mexico. Because many sculptures created by the Olmec have distinctive features, including thick lips and wide flat noses, some historians have asserted that the

LINK IN TIME

Earliest Known Writing Discovered

In September 2006, archeologists announced the existence of a stone slab, discovered in Veracruz, Mexico, which bears a written inscription in the language of the Olmec, the ancestors of the Maya and Aztecs. The stone, which is 3,000 years old, weighs about 26 pounds (11.8 k) and has 29 distinct glyphs, some of which are repeated, for a total of 62 characters. The discovery is especially significant because the earliest example of writing in the Western hemisphere previously known—the Tuxtla Script—dates from about C.E. 100, making it less than 2,000 years old.

Although earlier fragments of what appeared to be Olmec writing have been found prior to this discovery, scholars were unable to determine whether the symbols were merely pictures or an actual written language. It now appears clear that the Olmec had a written language, a fact that does not surprise most archeologists because the Olmec had an elaborate calendar, understood the concept of zero, and made paper. All of these achievements suggest an advanced civilization that would likely possess the ability to write as well.

The stone was discovered in 1999 by a road crew working about a mile from San Lorenzo, an Olmec site. María del Carmen Rodríguez of the National Institute of Anthropology and History of Mexico and her husband Ponciano Ortíz of Veracruz University analyzed and reported on the stone and its inscription. Unfortunately, the glyphs incised on the stone cannot be translated because there are no other significant inscriptions in Olmec with which to compare the writing. Until more examples of Olmec writing are discovered, the stone's message will remain a mystery.

Olmec descended from African explorers who crossed the Pacific Ocean and settled in Mexico. Others have claimed that the slanted eyes on some Olmec sculptures indicate that the Olmec originated in China.

IDENTIFICATION

Until the twentieth century C.E., most **archeologists** did not identify the Olmec as a separate and distinct culture, and they frequently misidentified Olmec **artifacts** as Mayan. For example in C.E. 1862, when a group of workers drilling for oil in the Mexican state of Tabasco uncovered a gigantic stone head, archeologists who evaluated it assumed it was Mayan, even though the style was quite different from most Mayan works of art.

In 1929, Marshall H. Saville, the first curator of Mexican and Central American Archaeology at the American Museum of Natural History, classified the heads as belonging to a different culture, which he called Olmec, meaning "rubber people." Ten years later, a carving with a date incised on the back was discovered near the site where the colossal head was found. The date, which was 300 years earlier than any known Mayan monument, made it clear that Olmec civilization was the older of the two. Later excavations at San Lorenzo, La Venta, Veracruz, and Laguna de los Cerros in Mexico confirmed that the Olmec people built the first complex society in the Americas and influenced the development of Mayan and subsequent cultures.

SOCIETY AND CULTURE

The Olmec were responsible for many innovations. For example, they developed a calendar that had 360 days. They also built flat-topped stone pyramids with steep staircases and channels below ground to bring water into their cities, and they invented the first system of **hieroglyphic** writing

This colossal stone head is one of more than 170 such structures carved by the ancient Olmec people out of volcanic rock. The distinctive headgear is thought to be the leather helmet worn by Olmec ball players. Although they share many features in common, each head clearly depicts a specific individual. (The Bridgeman Art Library/ Getty Images)

in the Americas. Archeologists were surprised to find that the plateau on which San Lorenzo was built, which is more than 160 feet high (48 m), was artificial. Clearly, then, the Olmec had a complex political and social structure that enabled them to engage in massive construction projects. The Olmec were agriculturalists, growing corn, beans, and squash.

Olmec society was **stratified**, with peasants who worked the land and an elite class of priests and nobles who lived in the cities and controlled religion and trade. Olmec notions of beauty seem odd to modern eyes. The Olmec knocked out their front teeth and deliberately deformed the heads of noble babies by elongating and flattening them.

Olmec theology deeply influenced religious beliefs of later Mesoamerican peoples. Their principal deity, represented as a jaguar, was adopted by later cultures and transformed into their god of rain. The plumed serpent, Quetzalcoatl, worshipped by the Aztec, was also an Olmec deity. The Olmec sacrificed humans, including infants, a practice that later Meosoamerican cultures continued.

OLMEC ART

The Olmec are perhaps most well known for their artistic accomplishments. Most distinctive are the colossal heads, 17 of which have been unearthed, that were carved out of basalt. These are the oldest known monuments in the Americas. The raw material for these sculptures had to be transported more than 60 miles (96 km) from their source to the cities in which they were carved.

The heads range in height from 4 to 11 feet (1.2 to 3.4 m) and weigh from 11 to 24 tons. Although they are somewhat stylized, the heads are individualized enough that archeologists believe them to be portraits of particular people, perhaps rulers of the Olmec. Some believe them to be portraits of great athletes, since they are all wearing helmets such as

might have been used to protect the heads of ballplayers from the hard rubber balls the Olmec used in their games.

Another unusual and common theme in Olmec art is what has been called the "were-jaguar." These are figures that appear to be part human, part jaguar. The jaguar itself appeared to be a symbol of royalty, and its association with a human figure may have been an attempt to infuse the human with the power of the great jungle cat. Some examples of were-jaguar sculptures seem to depict **shamans** in the process of transforming into jaguars, in an ecstasy of religious fervor. Others show strange-looking infants held in the arms of adult males. These babies have feline faces contorted in agony, and their legs seem to hang uselessly.

DEMISE

By the fourth century B.C.E., Olmec civilization had collapsed. No one knows what happened to bring about the end of the Olmec. Some scientists speculate that changes in the environment may have led to food shortages, but there is no definitive evidence to support this theory. Other researchers have suggested that the Olmec were destroyed by invaders, but there is no real evidence to support this theory either.

See also: Agriculture; Archeological Discoveries; Art and Architecture; Aztec Civilization; Mayan Civilization; Paleo-Indians; Religion; Technology and Inventions.

FURTHER READING

Coe, Michael. *Olmec World*. New York: Abrams, 1996.

Coe, Michael D., and Rex Koontz. *Mexico: From the Olmecs to the Aztecs*. 5th ed. London: Thames and Hudson, 2002.

Diehl, Richard A. *The Olmecs: America's First Civilization (Ancient People and Places)*. London: Thames and Hudson, 2004.

Paleo-Indians

Term used by **archeologists** to identify the earliest peoples who migrated to North America. Paleo-Indians are considered the ancestors of all native peoples in modern-day North, South, and Central America.

The term *paleo* is from the Greek, meaning "ancient," or "old." When applied to Native Americans, it refers to the earliest nomadic, hunter-gatherer groups who roamed the continent. What archeologists know about Paleo-Indians is based on rather sparse finds of material culture, objects such as spear points and bone tools.

In C.E. 1927, the first clear evidence of Paleo-Indian culture was found near Folsom, New Mexico. There, a bison with a spear tip embedded between its ribs was unearthed. Then, in 1932, near Clovis, New Mexico, the remains of a woolly mammoth was found near a cache of stone tools. This indicated that humans were hunting bison in America nearly 12,000 years ago, much earlier than scientists once thought.

The owners of those tools are now referred to as "Clovis people," after the town where the remains were found. The people of the Clovis culture are thought to be the earliest humans in the Americas. Scientists have long believed that they migrated from Siberia about 11,000 years ago, over a land bridge that emerged when sea levels dropped during the last Ice Age.

Recent **historical inquiry**, however, may push the date of human habitation in the Americas back by several thousand years, forcing scholars to revise their theories about the original settlement of the Americas. Some archeologists believe that they have found crude stone tools in Monte Verde, Chile, and Cactus Hill, Virginia, that, according to **radiocarbon dating**, are some 17,000 years old. Others have speculated that Pacific Islanders may have come to the Americas by boat earlier than 12,000 years ago, while some suggest that Africans colonized parts of South America.

Among the **artifacts** found at Clovis and Folsom are flint projectile points. Clovis points, as the older artifacts have been called, are distinctive leaf-shaped points about four to five inches long (10 to 12 cm), with a concave base and deep grooves (called flutes). The flutes, carved up the center of each point, probably enabled Clovis hunters to attach the points to the shaft of a short spear. Folsom points were crafted later than the Clovis points and are smaller. In addition to spear points, Paleo-Indians fashioned other stone tools, including scrapers, grinders, hammers, and knives. They also probably made tools from wood, plant fibers, and animal bones, tusks, and horns, but such artifacts have not survived.

Little is known about the **cultural history** or **social history** of Paleo-Indians because there

MIGRATIONS OF THE PALEO-INDIANS

Scientists long believed that the first people to migrate to the Americas arrived 11,000 years ago, crossing Beringia, a land bridge over the Bering Strait from Siberia into what is now Alaska. From there they migrated into Central and South America and eastward to the Atlantic Ocean. However, archeologists have found stone tools near Folsom and Clovis, New Mexico, which indicate that humans may have migrated 12,000 years ago. At Monte Verde, Chile, and Cactus Hill, Virginia, others have found crude stone tools that suggest an even earlier date of arrival, perhaps as much as 17,000 years ago.

are no artifacts other than a few stone tools to study. Archeologists believe that they were nomadic hunter-gatherers who traveled in small bands of related individuals, hunting large and small game and gathering fruits, nuts, berries, and seeds. They probably moved from one place to another with the change in seasons, returning to the same places year after year, as long as food was plentiful. They tended to live near water sources, not only so they had drinking water but also because prey animals could be found easily nearby.

Paleo-Indians probably lived in tents, which could be easily packed and transported. They did not own many possessions because they moved from place to place and carried only what they needed for daily life. In general, archeologists speculate that such societies tended to be **egalitarian**. The leaders who emerged tended not to be chosen on the basis of class or wealth, but rather because they possessed particular skills that helped the group survive.

The natural world in which the Paleo-Indians lived was very different from the world today. The climate was drier and colder than it is now, and the animal and plant life was quite different. Paleo-Indians hunted a variety of **megafauna**—very large species of animals that are now extinct—including mammoths, mastodons, 2,000-pound (909-kg) giant armadillos, 300-pound (1,362-kg) beavers, bison, saber-toothed tigers, and 1,500-pound (6,180-kg) short-faced bears.

In C.E. 1967, Paul Martin, a **geochronologist** (someone who studies the measurement of geological time), asserted that Paleo-Indians were responsible for the extinction of these and many other species of animals, including camels and horses, which actually originated in the Americas. Because they were not afraid of humans, Martin claimed, these animals made easy prey and were, literally, hunted out of existence.

Many scholars disagree with Martin, noting that it is far more likely that climate change caused the mass extinction. Shepard Krech III, of Brown University, for example, points out that it would have been virtually impossible for Paleo-Indians to kill more than "90 million 1,000-pound animals" with stone-tipped spears even if they hunted day and night.

Archeologists use the term *archaic* to describe the many and varied Native American groups that succeeded the Paleo-Indians, who were characterized by the fact that they did not make pottery or practice agriculture. These later groups adapted to different climates and environmental conditions, from the frozen arctic to the searing desert, and from the mountains to the coasts. In what is now the eastern United States, archaic peoples were succeeded by the Woodland cultures, Mound Builders who made pottery and planted crops. In the West, however, many groups never made the transition to a more settled way of life until the Europeans arrived in the fifteenth century C.E. and never relied on agriculture in any significant way.

See also: Agriculture; Archeological Discoveries; Beringia; Hunter-Gatherers.

FURTHER READING

Anderson, David. *The Paleoindian and Early Archaic Southeast*. Montgomery: University of Alabama Press, 1996.

Fagan, Brian M. *Ancient North America*. 4th ed. London: Thames and Hudson, 2005.

Potlatch

Ceremonial feast given by natives of the present-day northwestern United States and British Columbia, in which the host presented many valuable gifts to guests. The word *potlatch* comes from the Chinook language and means "gift." Among tribes of the Northwest, including the Haidas, Kwakiutls, Makahs, Nootkas, Tlingits, Nez Perce, and Tsimshian, the potlatch was

an important ritual that helped individuals proclaim and sustain their status in their kin groups and tribes. Potlatches form an important and unique part of the **economic history** of the inhabitants of the Northwest. Although the origins of the ceremony are prehistoric, Native American groups of the Northwest still host potlatches today.

The potlatch probably began as gift exchange preceding marriage but eventually expanded to help people celebrate other life events, including birthdays, deaths, and changes in social position. Ultimately, a potlatch could be celebrated at any time for any reason.

Although potlatches differed somewhat from tribe to tribe, the central ceremonies were similar. Potlatches were typically several-day-long celebrations lasting several days that involved masked dancing, singing, gaming, feasting, and other rituals in a strictly prescribed order. The most important aspect of the potlatch, however, was the distribution of gifts by the host. The more the host gave away, the higher his social status. People would often spend years amassing wealth simply in order to give it away. Typical gifts included blankets, furs, canoes, weapons, and slaves. While most potlatches were small celebrations within a tribe or kinship group, some were intertribal, hosted by chiefs. These were especially lavish, as each chief tried to outdo the others.

Potlatches were reciprocal, in that guests were expected to "repay" their hosts by holding their own celebrations and giving away even more lavish gifts. Thus, in a very important sense, a potlatch is not simply a party; it is an economic system, a way of distributing and redistributing wealth. In some groups, such as the Kwakiutl, potlatches became highly competitive and in some cases gifts were destroyed once they were received. Destroying a gift considered valuable served as a way for the recipient to demonstrate economic superiority over the host.

In the nineteenth century C.E., both the United States and Canada outlawed potlatches because they regarded the custom as wasteful and unproductive. So important was the practice to tribes, however, that most continued to hold potlatches in secret and pressured government officials to repeal the laws. The United States did so in 1934 and Canada followed suit in 1951. Potlatches are still held today by many northwestern tribes.

See also: Culture and Traditions; Society.

FURTHER READING

Beck, Mary Giraudo, and Martin Oliver. *Potlatch: Native Ceremony and Myth on the Northwest Coast*. Portland, OR: Alaska Northwest Books, 1993.

Poverty Point

See Mound Builders.

Pueblo

See Anasazi.

Religion

Although religious belief and practice varied greatly among Native American peoples, many characteristics were shared by nearly every group. Examining early beliefs, which strongly influenced later generations and modern life, reveals a great deal about what ancient people valued.

CHARACTERISTICS

One common element of many Native American religions was a focus on the cycles of nature. Groups that devised calendars, such as the Aztec and the Maya of Central America, did so primarily as a religious exercise, so they would know when to hold religious festivals and when to offer sacrifices. Other tribes made offerings to the deities of weather or the four cardinal directions in order to harness the goodness of natural forces and ward off droughts and other such disasters. Throughout the year, people might celebrate certain natural events such as the harvest, or the return of the salmon to the river, or the coming of the sap in maple trees.

In addition, most Native American religions were **animistic**; that is, people generally believed that everything, including objects, is animated by a soul or a spirit. They also believed that those sprits could be either positively influenced or offended by human behavior. Thus, among the Ojibwa, a hunter who had killed a bear might place an offering of tobacco in the bear's nostrils to placate the animal's spirit, or throw tobacco into a river to ensure safe passage.

Many Native American religions were also **pantheistic**; that is, they believed in a pervasive spiritual presence. For example, among the Lakota (a branch of the Sioux who lived on the Great Plains), Wakan Tanka (or Great Spirit) was in all things but not confined to any particular place or object. Manitou of the Algonkquians, a tribe of the Southeast, was regarded in much the same manner.

Native Americans generally did not worship or pray to the creator. They were **polytheistic**, praying to a number of deities, often representations of natural forces such as the rain or the wind. The Objibwa's primary deity was known as Kitche Manitou, but they also believed in guardian spirits who appeared to them in visions and dreams. The Hopi, too, believed in a supreme being, called Masau, but their rituals were constructed around kachinas, clay figures that represented the sprits of ancestors and environmental forces.

Some Native American groups also believed in evil spirits, such as ghosts. The Navajo and the Apache both feared ghosts and did what they could to avoid them. They were careful to bury their dead quickly so the living would not encounter the spirits of the dead. Sometimes the homes of the dead were burned or abandoned for the same reason.

RELIGIOUS EXPRESSION IN THE ANCIENT AMERICAS

3114 B.C.E. Date Mayans assigned to the beginning of the current cycle of creation

C.E. 700 The first *kivas,* round ceremonial rooms, are built by the Anasazi

ca. C.E. 1000 Temple mounds built at Cahokia

C.E. 800–1200 Toltecs originate *tlatchli,* a ball game that served as a reenactment of a sacred myth

C.E. 1325 Aztecs discover an eagle with a snake in its mouth perched on a cactus, as had been prophesied by their priests

C.E. 1487 Aztecs sacrifice 20,000 prisoners at the dedication of the Great Temple in Tenochtitlán

C.E. 2012 Date Mayans assigned to the end of the current cycle of creation

Sweat Baths and Lodges

North American and **Mesoamerican** groups both incorporated steam baths into their religious rituals. In North America, the structures for steam bathing came to be known as sweatlodges.

Generally reserved for men, sweatlodges were small buildings, constructed in a variety of different styles, with a hole dug into the floor. Heated stones were placed in the hole, and water was poured over the stones. The resulting steam was believed to purify both body and soul. After the coming of the Europeans, initiatory practices such as sweatlodges were discouraged, but today many Native Americans have revived the practice and many non-natives participate.

Kivas

The Anasazi people of the American Southwest built special underground rooms in their cities that were clearly intended for worship. The Anasazi began the practice of building these circular underground temples, called *kivas,* in about C.E. 750. The largest of the kivas is the Great Kiva in Chaco Canyon, New Mexico; it measures 65 feet (20 m) in diameter. Worshippers (limited to men only) usually entered a kiva by climbing down a ladder that was placed through a hole in the roof, but some kivas were accessible by underground passages. At the center of the kiva was a *sipapu,* a hole in the earth that symbolized humankind's connection with the earth itself. A stone bench lined the walls, which were themselves decorated with **petroglyphs.**

MESOAMERICAN RELIGION

The religions of Mesoamerica shared many characteristics with other Native American religions, but there were many differences, as well. The Maya, the Aztec, and other Mesoamerican groups believed that the universe existed in a delicate balance between two opposing forces—light and dark, good and evil—-and that it was, to some extent, up to humans to maintain the balance between these opposing forces. Members of these cultures played ball games that were not merely sporting events but were also rituals that symbolized the constant battle of the opposing forces of good and evil. The serious nature of the games is best illustrated by the fact that the losers were often sacrificed to the gods. It is thought that the Toletec originated the sacred ball game in about 800–1200 B.C.E

Many aspects of Aztec religion were borrowed from conquered peoples. The Aztec worshipped three major gods: Huitzilopochtli ("hummingbird wizard"), who was the sun god and also the god of war; Tezcatlipoca ("smoking mirror"), the supreme deity; and Quetzalcoatl ("plumed serpent"), the god of the priesthood, learning, and civilization. Beneath these were four other gods, envisioned as creators, who were remote and not much involved

LINK TO PLACE

Shamans in the Americas and Africa

Ancient healers were known as **shamans**. The word *shaman* comes from a Siberian language and means "he who knows." The term "medicine man" is sometimes used to refer to Native American shamans, but it is a term that most Native Americans today dislike. Many even dislike the term "shaman" because they believe it refers to the particular ethnic practice of Siberia and not to their own native healers. Shamans were doctors, religious leaders, spiritual visionaries, and sages.

Ancient Native American healers—like their modern counterparts—practiced their rituals within a cultural context that regards disease as having a spiritual cause. Thus, healing involved not only curing the specific illness but also curing the whole person, what people today sometimes refer to as "holistic medicine."

Each Native American culture had distinct practices, but there were many common elements. Rituals generally began with a purification or cleansing of the body. Native American sweat lodges were used for this purpose. The patient might also be given an herbal tea to induce vomiting, as a way to cleanse the body. The healer might involve the patient's family and friends or the entire tribe in chanting, dancing, and singing in order to draw out the spirit who was causing the illness.

Shamans still practice in parts of Africa today as they have for centuries, and they use many of the same methods that Native American healers do. For example, during a modern healing ritual conducted by a shaman in Tanzania, the healer first talks to the patient to determine what sort of spirit is causing the problem. She then brings together family and friends and uses songs and chanting to enter a trance-like state. The healer explains to the afflicted woman that she is ill because she has not "closed" the spirit of her father, who killed himself. As soon as she makes a sacrifice to close his spirit, she is told, her health will improve.

in human affairs, and a number of other gods, including Tlaloc, the god of rain, Chalchihuitlicue, the god of growth, and Xipe, the god of spring.

Like many traditional religions, all aspects of Aztec life were ruled by religious belief. In fact, the Aztec came to settle in the Valley of Mexico because their priests had prophesied that they would settle in a place where they found an eagle perched on a cactus holding a snake in its mouth. The Aztec founded their great city of Tenochtitlán in C.E. 1325 because, as legend has it, they came upon that very scene on an island in Lake Texcoco. Their belief in the god Quetzalcoatl may also have contributed to the downfall of their civilization. When Spanish invaders entered Aztec territory in C.E. 1519, their emperor, Moctezuma II, did not resist them because he believed that the leader of the Spanish forces might be the god whose return had been prophesied.

Human Sacrifice

Human sacrifice was another distinguishing aspect of Mesoamerican religions. Although many groups engaged in the practice, the Aztec conducted human sacrifice on an unprecedented scale. For example, **archeologists** have estimated that more than 20,000 captives were sacrificed at the dedication of the great pyramid temple in Tenochtitlán in C.E. 1487.

Human sacrifice among the Aztec and Maya was based on the belief that the gods provided for humans only if humans nourished the gods. The primary nourishment craved by the gods was human blood. In its mildest form, this requirement for blood sacrifice called for priests and nobles to draw a small amount of their own blood and allow it to drip onto fabric or paper that was then burned in sacrifice. They used obsidian

Made of wood decorated with a mosaic of turquoise and shell, this ancient mask is thought to depict the great Mesoamerican deity Quetzalcoatl, the plumed serpent. The mask was probably worn by priests during religious ceremonies honoring this Aztec god. (The Bridgeman Art Library/Getty Images)

knives to draw blood from genitals, ears, and extremities, and thorn-covered strings to pierce their tongues.

Aztec priests, however, began to teach that the gods were best pleased by the sacrifice of a living human heart. This belief led to wars designed not to capture territory, but to capture enemy warriors, who could be sacrificed to the gods to ensure divine benevolence. Archeologists know how these ceremonies were carried out from depictions on the walls of Aztec temples. Four priests held down the victim on an altar atop a pyramid. Another priest cut into the chest below the ribs and pulled out the still-beating heart. The priest burned the heart and the corpse was thrown down the steps of the pyramid.

Temporal Focus

Another common characteristic of Mesoamerican religion is its focus on time—and particularly on the end of time. Both the Aztec and the Maya believed that the universe had been destroyed and recreated four times, and that a fifth destruction was inevitable. The Mayan calendar system, in fact, predicted a date for this destruction: our year 2012. Mayan priests estimated that the current cycle began in 3114 B.C.E.

The Aztec had both a ritual and a solar calendar, which synchronized every 52 years. This led them to conceptualize life in 52-year cycles. At the end of each cycle, the Aztec believed, the gods might decide to destroy all of creation. In order to forestall this destiny, the Aztec held their most important religious ceremony, the New Fire Ceremony, every 52 years.

For five days, the Aztec went into mourning and extinguished the ritual fires burning on altars all over the land. On the last day, priests went to the Hill of the Star, where they waited for the constellation of the Pleiades to appear. When it did, the priests lit a fire from which the altar fires were relit. The people then celebrated the beginning of the new cycle.

LIFE AS WORSHIP

One important way in which Native American religion differs from modern Western religion is the extent to which it permeated every aspect of daily life. Even everyday activities had spiritual significance.

The Osage of western Missouri, for example, believed in the simultaneous unity and the duality of existence. They referred to their supreme deity as the Wakonda above and the Wakonda below, and represented the concept of this duality by referring to the relationship between the sky and the earth. Though different, and in many ways opposite, the earth and sky at the same time form a unity; together they form the whole of the universe as people understood it. The Osage expressed this same concept in how they laid out their towns. Divided by an east-west road, each town had two grand divisions, again symbolized by the earth and sky.

Marriage was also regarded as a way of uniting two opposite principles, and not only the obvious duality of male and female. Because social custom mandated that people marry someone from the opposite side of the town, marriage also symbolized the union of the earth and the sky. Residents of one part of the town went so far as to sleep on the right side of the body and put the right shoe on first, while residents of the other part did the opposite. Thus, even in sleep, the Osage practiced their religion.

The arrival of Europeans had a profound impact on the practice of Native American religions, although the extent of that impact varied from one place to another. The differing fates of native religious practices in North and South America reveal **patterns of continuity and change**. The Aztec, for instance, were destroyed completely as a result of European contact, and their religions vanished with them. By contrast, many native North American peoples still practice traditional religions in much the same way as did their ancient ancestors.

See also: Aztec Civilization; Mayan Civilization; Myths and Legends.

FURTHER READING

Ellwood, Robert S., and Gregory D. Alles. *The Encyclopedia of World Religions*. 2nd ed. New York: Facts On File, 2006.

Kidwell, Clara Sue, et al. *A Native American Theology*. Maryknoll, NY: Orbis Books, 2001.

Martin, Joel W. *The Land Looks After Us: A History of Native American Religion*. New York: Oxford University Press, 2001.

S

Slavery

Slavery was practiced in the Americas long before European colonists arrived in the fifteenth century C.E., but it was different from the racially based enslavement of Africans that was practiced by Europeans at that time. In order to justify enslaving Africans, Europeans held that Africans were less than human—inferior to whites. Native Americans, on the other hand, apparently did not regard their slaves as inherently inferior. The children of Native American slaves typically did not inherit their parents' status and, in some cases, slaves could earn their freedom and eventually live as respected members of the tribe.

Most of those people who were held as slaves by Native American groups were captives who had been taken in battle. Although some captives were held as slaves, many others were adopted into the victorious tribe as replacements for those who had been lost in the war. For example, some captives were expected to marry the widows of dead warriors. An adopted war captive, in general, was treated much like the person he or she replaced, as long as the person was not lazy or cowardly.

In some groups, criminals were enslaved as punishment for their transgressions. Among the Aztec, some people even sold themselves or family members into slavery in order to pay debts.

In the Pacific Northwest, the practice of slavery among Native Americans more closely resembled the form of slavery practiced by Europeans. Coastal tribes, such as the Tipai Ipai, that fished rather than hunted for food, tended to live in settlements where the accumulation of property earned a person social status. (This was generally not the case among the more nomadic groups, who did not accumulate property, because it was too much trouble to transport. In these groups other factors, such as bravery in battle, conferred status.) Thus, in the Northwest, slaves were indicators of wealth and were bought and sold as property.

Among the Tlingit of Alaska at the time of European contact in the sixteenth century C.E., the price of an adult slave might be as high as 500 of today's dollars in blankets. Although Tlingit slaves were generally well fed, they were excluded from all religious ceremonies and not allowed to marry a free man or woman. The Tlingit sacrificed slaves and buried their bodies beneath the corner posts of the homes of chiefs.

After contact with Europeans, many Native American groups who had not previously sold slaves began to do so. Some tribes turned on neighboring tribes and sold captives into slavery.

The Choctaw, for example, lost more than 2,000 men to the slave trade.

See also: Society.

FURTHER READING

Josephy, Alvin M., Jr. *500 Nations: An Illustrated History of North American Indians*. New York: Gramercy, 2002.

Society

Ancient Native American societies included both hunting-and-gathering groups and settled agricultural populations. These different groups developed distinct institutions, social relationships, and traditions, all of which distinguish one group of people from another.

SOCIAL ORGANIZATION

Hunter-gatherer groups tended to be small, usually 25 to 30 individuals, and **egalitarian**. Leadership was informal and based on a person's ability to help the group find food. As early peoples learned to farm, leaders emerged to control the distribution of food and land. In places where a surplus of food was produced, not everyone had to work in agriculture, and people began to specialize in other occupations. Only in these sorts of complex societies did social **stratification** emerge, with leaders sometimes claiming divine authority.

In North America, only the so-called Mound Building cultures evolved a relatively complex, socially **stratified** society, but they left no written record. **Archeologists** know about social stratification in ancient American societies such as those of the Mound Builders because the graves of some individuals were quite elaborate, and the goods buried in some of the graves were much more luxurious than those in others.

Most Native North Americans lived in tribes or chiefdoms. In a tribe, a group of people with kinship ties are led by a charismatic individual with special abilities. The leadership position is usually not hereditary. Tribal societies tend to be egalitarian and the community is more important than the individual.

Although chiefdoms are similar to tribes in many ways, chiefs tend to be more powerful than tribal leaders, and chiefdoms are more stratified than tribes. Also, there are city centers that help to administer the complex society. Although chiefdoms can be highly complex, they lack bureaucracies to do the things that states do—that is, collect taxes, distribute food, raise armies, and develop a system of justice. The Mound Builders' societies were chiefdoms, but the Aztec, Maya, and Inca societies of Mexico, Central, and South America were states, with centralized governments and large bureaucracies and hereditary kingships.

NATIVE AMERICAN FORMS OF GOVERNMENT

Nearly all native North American groups, whether tribes or chiefdoms, developed social and political structures based on kinship ties. In most tribes, the office of chief was a political position but not a military one. The chief was often an older man, chosen for his wisdom, while military leaders were often younger men. Chiefs usually were advised by tribal councils, so their authority was far from absolute, although it is not accurate to say that these forms of government were democratic.

Confederation

A more complex kind of organization often found among natives of North America was the confederation, a political union of two or more tribes. Some confederations were temporary, organized for purposes of defense in an emergency. Some, like the famous Iroquois League—which united the Iroquois, Seneca, Mohawk, Oneida, Cayuga, and Onandoga tribes beginning in about C.E. 1570—were longer-lived and more complex organizations.

TURNING POINT

Smallpox

Before Europeans arrived, historians estimate that the population of North America was 12 million. By the nineteenth century C.E., there were fewer than a half million Native Americans in North America. Most had succumbed to smallpox. The disease was able to sweep through the population so swiftly and effectively because the people had no immunity.

Smallpox also helped bring about the demise of the Inca Empire. Smallpox arrived in the Inca Empire even before the Spanish invaders did. The disease traveled into South America from the Carribbean Islands, which had already been settled by the Spanish. The outbreak spread rapidly along the empire's system of roads. Within a very short period of time, smallpox had taken the life of Huayna Capac, the *Sapa Inca,* and that of his successor. Two of the Sapa Inca's sons fought a bloody war for power, with Atahualpa emerging victorious. He returned to his capital city just as Francisco Pizarro and his men arrived. Pizarro tricked Atahualpa and captured him, but the war had already been lost. Within only a few years, smallpox killed from 60 to 90 percent of the Inca.

In the Iroquois League, several tribes gave up some of their powers and rights as independent entities to the confederation. Representatives of the tribes gathered into a supreme council, which had judicial, legislative, and executive functions. The confederacy even had a constitution, which was originally oral but later written down. Many historians believe that the Iroquois federal system of government influenced the United States' system, and that the Iroquois constitution influenced many elements of the U.S. constitution. Other, looser, Native American confederations included the Seven Council Fires of the Dakota (which was established around C.E. 1700 and included the Mdewakanton, Wahpeton, Wahpekute, Sisseton, Yankton, Yanktonai, and Teton) and the Powhatan Confederacy (which was established in the sixteenth century C.E. and included the Powhatans proper, the Arrohateck, the Appamattuck, the Pamunkey, the Mattaponi, and the Chiskiack).

State Systems

In Central and South America, the Inca, the Maya, and the Aztec developed much more sophisticated political systems than those in North America. Each can be considered a state in the modern sense of the term, an autonomous political unit under a single government.

The Inca had perhaps the most complicated system of government of all three of these civilizations, probably because their empire was so large, extending as it did from Ecuador to Chile. The *Sapa Inca* ("unique Inca"), was considered to be the son of the Sun God, and he ruled supreme in his kingdom. His position was hereditary, and only members of the original Inca tribe could aspire to be Sapa Inca.

The Inca governed through a federalist system that consisted of a central authority and four provinces. Each province was ruled by a governor, who was a relative of the Sapa Inca. Assisting each governor were about 90 local leaders known as the *tukuyrikuq,* each of whom managed a city and the areas surrounding it. Below the tukuyrikuq were four additional levels of administration. The *hunu kuraqa* were responsible for approximately 10,000 people each, the *waranqa kuraqa* for about 1,000, the *pachaka kuraqa* for 100, and the *chunka kamayuq* for 10.

Because there were not enough descendants of the original Inca tribe to staff these positions, the Inca government established an extensive civil service that trained and employed the children of conquered tribes. Boys and girls were given an intelligence test that determined if they were clever enough to become administrators. If they were, they were taken from their families and brought to the Inca capitol of Cuzco to be trained.

During the Classic Period of Mayan civilization (250 B.C.E.–C.E. 900) the leader of each city was given the title *ahau,* which means "lord" or "noble." The head of state was known as the *k'ul ahau,* which means "supreme ruler." This position was hereditary, but Maya leaders needed charisma to hold power—which was not the case with Aztec, where the position itself guaranteed power. To become the supreme ruler of the Maya, one must have taken a captive in battle. The captive was then sacrificed at the king's accession to power. Each Mayan city had an administrator, similar to a modern-day mayor.

Local rulers among the Aztec were called *tlatoani,* or "speakers." All of the heads of households were expected to defer to and pay taxes to the local talatoani. Though elected, the tlatoani was usually chosen from a particular lineage or kinship group.

Over time, as Tenochtitlán became the dominant city in the Aztec civilization, the tlatoani of that city became the supreme ruler—the *Hueyi Tlatoani,* or "Great Speaker." He was chosen by a council of nobles from members of the royal family. Although the emperor had tremendous power, he was nevertheless obliged to consult the council when he made important decisions. Military units were stationed throughout the empire, and military leaders, often members of the nobility, functioned as governors.

SOCIAL CLASSES

The tribes and chiefdoms of North America were essentially egalitarian societies. Some people rose to leadership positions, but those positions were rarely hereditary, and, in theory, anyone could become a chief. Also, because these groups typically did not have a great deal of wealth, the economic distinctions between the chief and the rest of the tribe were not great.

Of course, there were exceptions. The Mound Building cultures (ca. C.E. 800–1600) of the midwestern and southeastern parts of what is now the Unites States appeared to have had clear upper and lower classes, and the wealthy were buried with luxurious grave goods. In the Pacific Northwest, Native American groups allowed for and admired the acquisition of wealth, but the custom of the potlatch ensured that whatever wealth was acquired was given away.

Things were quite different in the more stratified societies of Central and South America. Mayan society was divided into nobles, priests, commoners, and slaves. Aztec society was divided into three broad classes as well. At the top of the social pyramid were the *pipiltin,* the nobility. Below them were the *macehual,* or commoners. At the bottom of the social structure were the *mayeques,* or serfs. Commoners could gain status and prestige, generally by military prowess. A commoner who captured four enemies in combat was promoted to the rank of *tecuhtli,* given land and serfs, and his children could be educated with the children of the nobility. While the nobility had privileges not accorded to other classes, they were also held to a higher standard of behavior. Being drunk in public was frowned upon among the lower classes, but it was an executable offense for members of the upper class.

The class of commoners was also subdivided, a person's status being determined by occupation. Merchants, jewelers, goldsmiths, and feather workers were considered high status.

Among the Inca, only members of the original tribe could aspire to the nobility. While workers, such as goldsmiths and weavers, were much admired, they could never aspire to become a member of the nobility. The only route to status and prestige was through the civil service.

LAWS

In most tribal societies, such as those in ancient North America, laws are generally not written down, and chiefs or elders were generally charged with meting out justice. But in the more stratified societies of Central and South America, the law was also a more complicated affair. There were standard—and sometimes severe—punishments for certain crimes.

Among the Maya, a thief was sentenced to be the servant of his victim and murder was punishable by death. For some minor crimes, the criminal's hair might be cut to shame him or her. The Aztec had a sophisticated legal system that included lower

courts and courts of appeal. All but the lowest level of the judicial system was appointed by the emperor, and judges served for life unless they were convicted of a crime. Some cases would be heard by the emperor himself. Much Aztec law was written down, but there was also a large body of common law.

Because punishment was harsh and swift, there was little crime among the Inca. For some crimes, such as cursing the gods, the punishment was being tossed off a cliff. The punishment for theft was the amputation of a hand or foot. Those criminals who survived their punishments were forced to spend each day proclaiming their crimes and begging for their food.

The Americas in ancient times were home to a number of quite different political and social systems—from complex states to small family groups. While North American groups tended to have simpler social and political structures, Mesoamerican groups evolved more complex social and political systems.

See also: Aztec Civilization; Incan Civilization; Mayan Civilization.

FURTHER READING

Demarest, Arthur, and Rita P. Wright. *Ancient Maya: The Rise and Fall of a Rainforest Civilization*. Cambridge: Cambridge University Press, 2004.

Diamond, Jared M. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1999.

Pritzer, Barry M. *A Native American Encyclopedia: History, Culture, and Peoples*. New York: Oxford University Press, 2000.

Sharer, Robert J. *Daily Life in Maya Civilization*. Westport, CT: Greenwood Press, 1996.

T

Taino

Native American inhabitants of a number of Caribbean Islands, including Cuba, Haiti and the Dominican Republic, Puerto Rico, Jamaica, and the Bahamas. The Taino were the first Native Americans encountered by Christopher Columbus when he arrived in the Americas in 1492.

About 2,000 years ago, the Taino migrated from the area now known as Venezuela to nearby islands in the Caribbean, where they led pleasant, relatively untroubled lives. They were able to grow abundant crops using a system that involved little work. They planted their crops in *conucos,* large mounds packed with leaves to reduce erosion. They also sowed many different kinds of seeds, a practice that ensured that no matter what the weather conditions were, something would grow.

The Taino cultivated cassava, maize, squash, beans, peppers, sweet potatoes, yams, and peanuts. They also raised cotton, which they used to make fishing nets, and tobacco, which they smoked during religious ceremonies. They hunted small mammals and birds, and fished. Their simple way of life left them with large amounts of leisure time, which they used to play games, make pottery and other art works, and practice elaborate religious rituals.

Taino society was **hierarchical**, with three distinct social classes: the *naborias,* or working class; the *nitainos,* or subchiefs and noblemen, including priests and medicine men; and the *caciques,* or chiefs. The importance of each cacique was determined neither by lineage nor by prowess in battle, but rather by the size of the clan. The naborias lived in round buildings called *bohio,* which could hold from 10 to 15 families. The chief and his family lived in a large rectangular building. The Taino practiced **polygamy**: each man had two or three wives; caciques had as many as 30.

No one is sure how many Taino lived in the Caribbean Islands before the arrival of the Europeans. Estimates have ranged from as high as four million to as low as 100,000. Most scholars seem to accept 400,000 as a reasonable number.

The Taino were an extraordinarily peaceful and trusting people. This made them nearly defenseless in their dealings with Columbus and the Spanish settlers who followed. Columbus himself noted that the Taino would trade objects of very high value (as far as Europeans were concerned) for mere trinkets, and he thought they were naïve because they had no concept of owning land.

GREAT LIVES

Bartolomeo de las Casas (1484–1566)

Bartolomeo de las Casas settled in Cuba in 1502, just ten years after Columbus had arrived in the Caribbean. He had been a soldier, and as a reward for his military service he was given an estate in Cuba, which included hundreds of native slaves.

When las Casas was ordained as a Catholic priest in 1514, however, he gave up his ownership of slaves and devoted the rest of his life to seeking social justice for the Taino and other native groups. In 1515, las Casas brought his case to King Ferdinand of Spain, who referred him to Bishop Juan Rodriguez de Fonseca, president of the Council of the Indies. When las Casas told de Fonseca that Spanish settlers had killed 7000 native children in three months, he replied only, "And how does that affect me?"

Las Casas, appointed by Ferdinand as "Protector of the Indians," returned to the islands, where he tried in vain to protect the natives. Believing that the Taino were too frail for the work they were forced to do, las Casas suggested that slaves imported from Africa would be heartier and less subject to injury. Unfortunately, his advice was accepted, and in 1517 the first African slaves were transported to the Caribbean. Later in his life, las Casas wrote that he deeply regretted having made this proposal.

Las Casas is probably best remembered for his book *Brief Report on the Destruction of the Indians (or Tears of the Indians,* 1552) in which he outlines in graphic and horrible terms the treatment of the native peoples by the Spanish. He recounts an instance in which a group of Spaniards attacked a Taino settlement: "They grabbed suckling infants by the feet and, ripping them from their mothers' breasts, dashed them headlong against the rocks. . . . They spared no one, erecting especially wide gibbets on which they could string their victims up with their feet just off the ground and then burn them alive thirteen at a time, in honor of our Savior and the twelve Apostles, or tie dry straw to their bodies and set fire to it."

Las Casas died in Madrid, Spain, in 1566. Today, he is recognized as a national hero in Cuba and Nicaragua.

The Taino were utterly devastated by the coming of the Europeans. They were forced to give up large portions of their crops as **tribute** to the Spanish overlords, and were enslaved and forced to work in silver mines. Taino leaders were hung if they attempted to resist the domination of the foreigners. However, disease was the worst killer—thousands died of smallpox and other viruses for which they had no resistance.

Whether the Taino actually became extinct or whether some few members of the tribe remained to carry on the heritage of these peaceful people is a matter of debate. Most scholars believe the Taino were completely wiped out.

See also: Agriculture; Religion; Society.

FURTHER READING

Deagan, Kathleen, and Jose María Cruxent. *Columbus's Outpost Among the Tainos: Spain and America at La Isabela, 1493–1498*. New Haven, CT: Yale University Press, 2002.

Rouse, Irving. *The Tainos: Rise and Decline of the People Who Greeted Columbus*. New Haven, CT: Yale University Press, 1993.

Technology and Inventions

The social and material innovations developed by ancient Native Americans were often overlooked, discounted, or attributed to foreign cultures by European settlers. Calendars, medicines, toboggans, canoes, and weapons were among the astounding inventions of early Native Americans, innovations that had a direct impact on Native American survival as well as on all of modern civilization.

NATIVE AMERICAN INNOVATIONS

When European explorers came to the so-called "New World," they regarded themselves as much superior to the "primitive" and "barbaric" peoples whom they encountered. Often, Europeans were incapable of interpreting the native technology they saw. When they did recognize remarkable accomplishments, such as the magnificent earthwork mounds at Cahokia in Illinois, they assumed that another culture, which they also assumed to have been white, had built them. Among the mounds that were misinterpreted were those built by the Hopewell people, beginning in about 200 B.C.E.

Of course, the truth is that the native peoples of North and South America were far from primitive. In many ways they were more advanced than their European counterparts. Aztec and Mayan cities of Mexico and Central America rivaled Rome in their use of aqueducts and underground systems to carry water. The Hohokam people of the United States southwest also constructed extensive irrigation canals beginning in about 1000 B.C.E. The construction of thousands of miles of roads by the Inca in what is now South America, beginning in about C.E. 1400, was done under circumstances much more difficult than those faced by the Romans—and without the use of the wheel.

Depicted here are two ancient Aztec *atlatls*, or spear throwers. These particular atlatls are decorated with images of gods and warriors and show the groove into which a spear would be fitted. The atlatl allowed warriors to throw their spears much farther than they could have otherwise. (Werner Forman/Art Resource, NY)

ANCIENT WEAPONS

The Atlatl

The *atlatl* is a device used by a warrior or hunter to increase distance, accuracy, and power in hurling a spear. *Atlatl* is an Aztec word that means "water thrower," which indicates that its original use was to spear fish. Although the Aztec did not invent this tool, modern Americans use their word for it because the tool so frightened the Spanish conquerors who first encountered the Aztec in the sixteenth century C.E.

An atlatl consists of a stick with a groove cut down its entire length, ending in a cup-like slot. The user fits a spear in the groove, and rests its end in the cup, then holds onto the atlatl at the end farthest from the cup. Using an overhand movement, much like striking a tennis ball, the user propels the device forward, releasing the spear. The extra leverage provided by the atlatl increases the speed and accuracy of the spear.

Atlatls were from one to three feet long (30 to 90 cm), depending on how they were to be used, and were frequently decorated with carvings. The longer the atlatl, the greater the force with which it could propel a spear. A spear thrown with the aid of an atlatl had so much power that it was able to pierce metal armor. The atlatl eventually evolved into the bow and arrow.

The bridges built by Roman engineers were remarkable, but so was the bridge built by the Inca to cross the Apurímac River in southern Peru. This suspension bridge built of plant fibers was 150 feet long (945 m) and lasted for more than 500 years. The pyramids of Egypt are remarkable edifices, but no more so than the Maya and Aztec pyramids, which were built under much more difficult circumstances—atop mountains, and not on the flat desert sands.

Like the ancient Egyptians, the Maya invented a written language that used **hieroglyphs**. Their hieroglyphs sometimes represented complete words but sometimes represented sounds, which is a step in the direction of creating a phonetic alphabet. Like the Egyptians, the Maya carved hieroglyphs on stone monuments, called *stelae,* to commemorate the deeds of their heroes and gods. They also invented paper made from fig bark.

MAYAN AND AZTEC CALENDARS

Among the most remarkable accomplishments of ancient Americans was the Mayan calendar. The Maya, who were particularly adept at **chronological thinking**, actually had three different systems of measuring time, all of which appeared on their circular stone calendars. The three systems were called the Long Count, the Tzolkin (or divine calendar), and the Haab (the civil calendar).

The Haab, like the modern secular calendar, is based on a 365-day year. Unlike the modern calendar, however, the Maya divided the year into 18 months of 20 days each, with a five-day period at the end, a time that was considered unlucky. The Maya had very accurate knowledge of solar movement and understood that the year was actually slightly longer than 365 days, though they did not attempt to account for it in their calendar, as we do when we add an extra day every fourth year—which is how we get leap year.

MEDICAL INNOVATIONS

Native Americans were also innovators in the medical field. There is evidence that the Inca perfected a kind of brain surgery known as trepanation. Trepanation involves removing a circular piece of bone from the skull of a patient, often because of a skull fracture or painful swelling of the brain from other causes.

There is considerable evidence of trepanation going back literally thousands of years, when it

must have been performed with stone tools. However, the Inca seem to have been masters of the procedure. A sample of 214 trepanned skulls from Peru shows that 55 percent of those who had the surgery healed completely. Historians have noted that when the procedure was performed in Germany in the nineteenth century C.E., only a quarter of the patients survived.

Beginning nearly 3,000 years ago the Maya made false teeth out of seashells. A 600-year-old jaw uncovered by **archeologists** demonstrates that the procedure was so successful that the patient's bone grew back to hold the dentures.

An understanding of herbal teas used as contraceptives by Native American women helped in the development of modern oral contraceptives. Both the Shoshone and the Matto Grosso of Paraguay made teas from herbs that modern science has shown reduce fertility.

Native Americans who first cultivated tobacco used it both in religious rituals and for medical purposes. The Maya used tobacco to cure asthma, congestion, headaches, poor digestion, toothache, and a number of other ailments.

TRANSPORTATION

Native Americans were the first to create the kind of sled known as the toboggan. The word is from the Algonquian language and refers to a sled without runners, crafted from parallel pieces of wood fastened together with cross pieces called battens and bent so that the front of the sled curves up. The toboggan was originally made in order to carry animals killed in the hunt through the snow. The Inuit made toboggans from whalebone; other tribes used hickory, ash, or maple.

Both the *kayak* and the birch bark canoe are Native American inventions. A kayak is a canoelike boat usually built for one person. It is made from wood lashed together with sinew and covered with seal hides, leaving a small opening in which the kayaker sits. The design gives the craft unusual stability and the ability to ride high on the water, keeping the kayaker dry, which is especially important in frigid Arctic waters.

Birch bark canoes were prevalent in New England, but were also made anywhere in the country that birch trees grew large enough to fashion a canoe. The size of the tree was important, because most canoes were covered with a single piece of bark. Canoes were made in all sizes, some just large enough to hold one person, others large enough to hold 50.

Men built the frames for these canoes out of wood that was bent to shape by steaming. Then women covered the frame with birch bark, which they peeled from trees, sewed together, and attached to the frame with spruce root fibers. Pine pitch was used to seal the seams. In areas where birch bark was rare, canoes were covered with animal hides.

Canoes were the ideal vehicle for transportation in areas with many streams and lakes. They were lightweight and could easily be portaged, or carried from one stream to another, when necessary. Despite its relatively light weight, a canoe paddled by a single individual was sturdy enough to carry as much as a ton of cargo. However, canoes were easily damaged in rapids and often had to be repaired on the run, so native sailors carried materials with them to fix any tears caused by sharp rocks and debris.

Canoes were also used in **Mesoamerica**. The great Aztec city of Tenochtitlán was built on a lake and instead of streets, its builders constructed canals, beginning in about C.E. 1350, which were navigated by canoe.

SPORTS

Ball games, such as football and soccer, are based on ball games played by Native Americans who lived in Central America. These peoples invented the ball court and made the first balls out of rubber. The earliest ball courts were made of packed earth, with earthen retaining walls, but by the time of the Aztec, ball courts had become much more elaborate. At Chichén Itzá, on the Yucatán Peninsula of Mexico, the ball court was 283 feet long (86 m), 100 feet wide (30 m), and surrounded by walls 27 feet high (8 m). There were temples at both ends of the court and stone seating along the sides.

The game that the Aztec called *ullamalitzli* was played with a six–inch (15-cm) solid rubber ball. One object of the game was to drive the ball into the opponent's end of the field; another was to propel the ball through a stone or wooden hoop, without the use of one's hands. This game differed from modern ball games, however, in that it was considered part of a sacred ritual and the losing team risked execution.

Native Americans in North America invented the game of lacrosse, which is still played today and has become increasingly popular. Players used a netted racket to throw a ball through the opponent's goal. Again, use of the hands was prohibited.

The ancient Native Americans invented many other things still in use today, including chewing gum, snowshoes (which were invented about the time the first Native Americans arrived in the America, in about 12,000 B.C.E.), moccasins, tipis, hot chocolate, totem poles, and beef jerky, just to mention a few.

See also: Aztec Civilization; Great Serpent Mound; Incan Civilization; Language and Writing; Mayan Civilization; Mound Builders; Tools and Weapons; Totems.

FURTHER READING

Ceaton, P.F. *American Indian Inventions*. Pittsburgh, PA: Ceshore Publishing, 2002.

James, Peter, and Nick Thorpe. *Ancient Inventions*. New York: Ballantine, 1994.

Kessel, William B., and Robert Wooster, eds. *Encyclopedia of Native American Wars and Warfare*. New York: Facts On File, 2005.

Porterfield, Kay Marie, and Emory Dean Keoke. *American Indian Contributions to the World: 15000 Years of Inventions and Innovations*. New York: Facts On File, 2001.

White Deer of Autumn, and Shonto W. Begay. *The Native American Book of Life*. Hillsboro, OR: Beyond Words Publishing, 1992.

Teotihuacán (ca. 300 B.C.E.–C.E. 700) (tay-oh-tee-wakan)

Located about 30 miles (48.3 km) northeast of modern-day Mexico City, the largest ancient city in the Americas. Little is known about the people who built this great city, not even what they called it in their own language. The name *Teotihuacán* was given to the ruins of the city by the **Mesoamerican** tribe known as the Aztecs, who were awed by the scale of the city and revered it as a holy place. It means "city of the gods" or "the place where men become gods."

At its peak, Teotihuacán covered an area of more than eight square miles (21 sq. km). It is laid out along a north-south avenue, called by the later Spanish conquerors *Calle de los Muertos* (Street of the Dead, because they wrongly assumed that the temples along the road were tombs.). At the height of its influence, Teotihuacán may have been home to 125,000 people and more than 2,000 structures, including more temples than any other ancient city in the Americas.

In the northern part of the city, on the east side of the Street of the Dead, is the Pyramid of the Sun. This structure is the largest stone pyramid in the Americas, and the third largest in the world, rising to a height of 213 feet (64 m) and measuring 738 feet (224 m) on a side. Originally constructed as four platforms—each smaller than the one below, creating a stepped effect—the pyramid was built over four lava-tube caves, which were thought to have spiritual significance for the people of

The Pyramid of the Sun, built in Teotihuacán in about 150 B.C.E., is the third-largest pyramid in the world. It was once topped by a temple and covered with brightly painted plaster. The Aztec named the pyramid when they visited Teotihuacán hundreds of years after it was abandoned. (Art Resource, NY)

Teotihuacán. Atop the pyramid was a temple of which nothing remains today.

Other major structures in Teotihuacán include the Pyramid of the Moon, the Temple of Quetzaelcoatl (Feathered Serpent), and the Ciudadela, or citadel. The Ciudadela is a large sunken plaza that was at one time surrounded by buildings and platforms. The Spanish gave the plaza its name, mistakenly assuming that it was the ruins of a fortress.

Because of the absence of military themes in painting and sculpture, it had long been assumed that the people of Teotihuacán were peace-loving and **egalitarian**. A series of archeological discoveries in recent years suggests strongly, however, that the culture was much less peaceful than was once thought.

In the C.E. 1980s, the remains of 137 people, hands bound behind their backs, were discovered beneath the Temple of the Feathered Serpent. The bodies may have belonged to warriors captured in battle. Over the years, **archeologists** have found other tombs in the Pyramid of the Sun, some of which seem to suggest that the culture valued militarism, especially in the choice of animals buried with the dead. Animals that symbolize warriorlike qualities, such as jaguars, wolves, coyotes, and puma, which symbolize warriorlike qualities, have often been found buried with sacrificial victims. A C.E. 2004 discovery of 12 bodies, 10 of which had been decapitated, may also be evidence of a warlike culture.

Some time in the eighth century C.E., Teotihuacán was abandoned. No one is sure what happened, though it appears that the city was deliberately burned around C.E. 650. Whether warfare was involved or whether the natural resources were depleted, forcing people to move in order to survive, no one knows.

See also: Archeological Discoveries; Aztec Civilization.

FURTHER READING

Sugiyama, Saburo et al. *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacán*. Cambridge: Cambridge University Press, 2005.

Thule Tradition (thoo-lee)

The name given by **archeologists** to ancient people who lived in the Arctic from 700 B.C.E. to C.E. 1600 and are the ancestors of today's Inuit peoples. The name is derived from the Greek phrase, "Ultima Thule," which refers to the northernmost habitable region of the world.

The Thule tradition evolved out of the earlier Norton tradition (2750 B.C.E. to C.E 800) and refined many of its innovations, such as skin boats, elaborate harpoons, and skin floats. However, the people of the Thule tradition carried maritime hunting even further than their predecessors, hunting bowhead whales on the open seas in large skin boats such as *umiaks* and *kayaks*. They also developed the throwing board, which was used to propel a harpoon farther than it could be thrown without the leverage provided by the board. Like the Norton tradition, the Thule tradition is also known for its toggling harpoon heads, which would release the tip of the harpoon from the shaft once it was embedded in the prey.

Because they were such efficient hunters, people of the Thule tradition were able to acquire large amounts of surplus food and erect relatively large permanent communities. Like the houses of the Norton tradition, Thule houses were built partly underground. The houses were roofed with baleen (the fringed part of whales' jaws), hides from various sea mammals, and sod. The inhabitants slept on raised platforms at the rear of the house.

People of the Thule tradition also developed an innovative method of hunting sea birds. Thule hunters lowered nets (probably developed originally to catch fish) from the tops of cliffs using sealskin ropes. Often, one hunter would descend the cliff while two or three others steadied the ropes. By this method they not only captured birds but also gathered eggs and plant life that grew on the cliffs.

So inventive were the Thule people that, by C.E. 1000, they had developed all of the major items still used by Inuit peoples to survive in an arctic climate, including a form of snow goggles. Around this same time, Thule peoples began to move east across northern Canada toward Greenland. They also expanded into the interior of the Canadian mainland and as far south as Kodiak Island in the Gulf of Alaska. Their culture was disrupted by the arrival of Europeans in the Arctic in the sixteenth century C.E. As in the case of other Native American groups, Europeans took over their land and relocated them to less desirable territory.

See also: Norton Tradition.

FURTHER READING

McGhee, Robert. *Ancient People of the Arctic*. Vancouver, Canada: University of British Columbia Press, 2001.

Tiwanaku (200 B.C.E.–C.E. 1000)

Tiwanaku, an archeological site 13,000 feet (3,962 m) above sea level in the Andes Mountains in what is now Bolivia, was once the administrative capital of an ancient civilization that may have been the precursor to that of the Inca. Founded in about 200 B.C.E., the small agricultural center of Tiwanaku grew to become a major urban center by C.E. 600. By then it was home to approximately 40,000 people and covered an area of 2.3 square miles (5.6 sq km).

The success of this civilization was due primarily to the development of inventive agricultural methods that allowed the people of this city to grow an abundance of food in an inhospitable mountainous environment. One technique, called raised-bed irrigation, involved digging an extensive network of canals, using the soil from the excavation to create raised beds for planting. The canals provided water for the crops. They also absorbed heat from the sun during the day, which kept the crops warm during the bitter cold nights in the mountains.

The remains of Tiwanaku include impressive structures such as the great Gateway of the Sun, carved from a single piece of stone, which bears carved symbols indicating that it functioned as a calendar. The site also features massive stone blocks, carved to resemble persons holding cups in one hand and scepters in the other. Archeologists believe the sculptures may represent rulers or priests. Tiwanaku is also home to terraced pyramids, the largest of which, the Akapana, has a 656-square-foot (61-sq-m) base and rises to a height of 55.8 feet (17 m).

The Tiwanaku culture disappeared about C.E. 1000. As with many ancient cultures in the Americas, no one really knows what happened. There is evidence that a period of drought may have caused widespread famine that devastated Tiwanaku.

See also: Archeological Discoveries; Incan Civilization.

Tobacco

A broad-leaved plant, first domesticated by the Maya, an ancient **Mesoamerican** group, more than 2,000 years ago. Tobacco leaves were dried, cured, and then smoked as part of religious rituals. The importance—both in rituals and in daily life—of tobacco to the Maya is underscored by the many representations of the plant in Mayan art.

European settlers learned about tobacco use from the **indigenous** people of the Americas and soon began exporting vast quantities to Europe, where the habits of smoking, chewing, and taking snuff, or powdered tobacco, became wildly popular. Christopher Columbus, in fact, received tobacco leaves as a gift from the Taino—the Native Americans who greeted him when he first landed in the Americas—but Columbus did not know what they were and threw them away. It was not until C.E. 1560 that tobacco was introduced in Europe.

GROWING AND PROCESSING TOBACCO

Native American farmers began cultivating tobacco by gathering seeds from wild tobacco plants

LINK IN TIME

Legacy of Ancient Ritual

Since C.E. 1964, when Luther L. Terry, then the surgeon general of the United States, first sounded the warning about the dangers of smoking, many people quit the habit, and proportionately fewer young people have started smoking. However, even today, smoking accounts for more than 400,000 deaths each year in the United States. As a group, given their long history of tobacco use, Native Americans are at great risk for death from smoking-related diseases because more Native Americans smoke than does any other population in the country. According to the 2004 National Health Survey of Adults, 33.8 percent of Native Americans smoke, compared to 22.2 percent of white Americans, 20.2 percent of African Americans, 15 percent of Hispanics, and 11.3 percent of Asian Americans. Even more worrisome is the fact that more than half of all high school students in schools funded by the National Bureau of Indian Affairs (BIA) smoke, compared with 22 percent of students in other high schools. In addition to a history of smoking, another reason for tobacco use by young people may be that laws governing the sale of tobacco to minors do not apply on Native American lands, allowing children easy access to tobacco products.

Every year representatives of the National Native Conference on Tobacco Use meet to develop strategies to curb tobacco use among Native Americans. One idea that has emerged from these meetings is the importance of emphasizing the difference between the traditional ceremonial use of tobacco and modern recreational use. Ancient Native Americans used tobacco only occasionally; they did not smoke 20, 30, or more cigarettes a day, as many smokers do. Moreover, traditional tobacco itself is much less dangerous than commercial tobacco, which has more than 4,000 additives, some of which are carcinogenic, or cancer causing.

Native American antismoking advocates are also working to try to stop commercial cigarette companies from using traditional Native American symbolism to sell cigarettes and from sponsoring rodeos, sports tournaments, powwows, and other events that attract young people who live on today's reservations.

and scattering them on ground that had been cleared of brush. Farmers harvested the leaves and stems at intervals, bringing them back from the fields to the village to be dried. Different tribes used different drying methods. Some dried tobacco in sweatlodges, steam-filled rooms that Native Americans used in purification ceremonies. Others allowed the leaves to be covered with the morning dew, then brought them inside the home to dry, repeating this process over a period of weeks. Farmers usually dried the stems and leaves separately.

Rubbing the dried leaves (or stems) together by hand produced a coarse powder that was stored in tightly woven baskets. Native Americans considered tobacco made from leaves to be the highest quality, while tobacco made from stems was regarded as inferior. Lower-grade tobacco typically was given as a gift to the spirits or to guests who were considered socially inferior.

TOBACCO USE

Most ancient Native American cultures considered tobacco a sacred herb, burning it as an offering to the gods, much as members of some religions burn incense. They also smoked tobacco in pipes, chewed it, steeped it in water, and drank it, as well as using it medicinally. Tobacco was a valuable commodity often traded or given as a gift.

In some tribes, only **shamans**, or priests, smoked tobacco and then only as part of a religious

ritual. Taken in quantities much greater than smokers today inhale, the nicotine in tobacco is a powerful hallucinogen. Shamans smoked large amounts of tobacco as a way of journeying to the world of spirits. In other tribes, smoking was more widespread but still reserved for special occasions such as religious or communal rituals. In general, only men smoked.

Native Americans also used tobacco for a variety of medical applications. Chewing tobacco was a traditional toothache cure, for example, and healers sometimes applied chewed tobacco to wounds and snakebites as a curative. Some Native Americans mixed tobacco with other herbs and placed the mixture in "medicine" bags worn around the neck to ward off evil or bring good luck. Interestingly, the reason Europeans began to use tobacco was because of their belief in its medicinal properties; tobacco was thought to be a cure for everything from eczema to cancer.

PIPES

Because tobacco was so important in Native American society, the pipes in which it was burned were also treasured. There is a Sioux legend that tells how the White Buffalo woman brought the first pipe to the people. As she hands it to the chief, she says, "Behold this and always love it. It is very sacred and you must treat it as such. With this you will send your voices to Wakan Tanka, your father and grandfather."

The typical pipe was composed of a hollow stem, usually made of wood or bone, and a bowl made of catlinite (also called pipestone) or soapstone. To hollow out a piece of wood, Native Americans used a variety of methods. They chose branches with a lot of pith, or soft interior, and used a bone or horn to remove the soft material. Native Americans of the Northwest sometimes hollowed out a branch by soaking it in salmon oil, then placing the grub of a beetle inside and sealing off the ends. As it matured, the beetle devoured the pith, leaving a hollow tube. The two pieces of the pipe could be fitted together for smoking, then disassembled to fit in a small pouch that could be easily carried.

There were many different styles of pipes, from the beautiful stone platform **effigy** pipes of the Hopewell culture of the North American Midwest (people who thrived from about 100 B.C.E. to C.E. 200) carved into elaborate representations of people and animals, to the tomahawk pipe, with a hatchet on one end and a pipe on the other. Tomahawk pipes were not used in battle but were generally reserved for ceremonial use, often as "peace pipes."

The first European settlers in America learned about tobacco from Native Americans, and the plant gained widespread popularity worldwide within less than century.

Today, tobacco is viewed by most Americans as noxious and deadly, a point of view that is at odds with tobacco's status as a sacred herb among most Native American cultures, many of which still use it in religious ceremonies.

See also: Agriculture; Mayan Civilization; Religion; Taino.

FURTHER READING

McCay, William. *The Truth About Smoking*. New York: Facts On File, 2005.

Winter, Joseph C., ed. *Tobacco Use by Native North Americans: Sacred Smoke and Silent Killer*. Norman: University of Oklahoma Press, 2000.

Toltec Culture

Culture that dominated large portions of central Mexico from about the tenth to the mid-twelfth century C.E. and deeply influenced the great Maya and Aztec cultures.

The great city of Teotihuacán in central Mexico was sacked in about C.E. 650. For 200 years afterward, the region went through a period in which there was no centralized government or predominant culture. Then, around C.E. 950, a culture based in Tula in northern Mexico began to spread through Mexico and Central America. Some scholars believe that this group, referred to as Toltec, may have been refugees from Teotihuacán who preserved and disseminated its culture. Unfortunately, much of what is known today about the Toltecs comes solely from Aztec legend.

At its most populous, Tula may have been home to as many as 40,000 people, living in a 3-square-mile area (1.2 hectares). The residents farmed outside the city walls in fields irrigated by a system of dams and canals. The central part of the city contained a large plaza bordered by pyramid temples and ball courts. The earliest known *tzompantli,* a wall built from the skulls of sacrificial victims, is found in Tula.

The Toltec brought the many small states in Central America under their control to form a loosely knit empire that they ruled from Tula between C.E. 1000 and 1200. Influenced by the architecture of Teotihuacán and by the earlier **Mesoamerican** culture of the Olmecs, the Toltec were great artists and architects. They smelted metals and built beautiful temples with intricate carvings.

The Mayan city of Chichén Itzá (conquered by the Toltec in the eleventh century C.E.) demonstrates a combined Toltec-Mayan influence in both art and architecture. The Temple of Warriors in Chichén Itzá, for example, is a larger version of a structure at Tula. The pyramid of El Castillo, also at Chichén Itzá, is not only an impressive structure in itself but also demonstrates the Toltec knowledge of astronomy. The sun rises over one corner of the pyramid at the summer **solstice** and sets over another at the winter solstice. During the spring and fall **equinoxes**, the sun creates a pattern of triangles that resembles a snake slithering down the pyramid.

Although the Toltec did not introduce the cult of Quetzalcoatl, the plumed serpent god of Mesoamerica, he was a crucial part of their mythology, and their stories influenced both the Aztec and the Maya. The central figure of the Toltec myth is Topiltzin, also referred to as Quetzalcoatl, son of Mixcoatl and a Toltec princess, Chimalman.

In Toltec mythology, a father and son—probably mythologized versions of real people—create the Toltec empire by conquering neighboring cities. When Topiltzin conquers the Maya, he becomes Kulkulcan (the Mayan word for "feathered serpent"). His son, Huemac, is destroyed by the evil Tezcatlipoca but, before dying, Huemac razes the Toltec capital at Tula to prevent the evil forces from dominating it. He then sets himself on fire and rises to become the Morning Star—the planet Venus. He, like his father, is referred to as Quetzalcoatl.

Aztec mythology predicted that Quetzalcoatl would one day return to rule over his people. Unfortunately, when the Spanish conquistador Hernán Cortés arrived in Mexico in C.E. 1519, the Aztec thought he might be Quetzalcoatl. This mistake gave Cortés at least a temporary advantage over the Aztec.

The Toltecs were probably the inventors of high-stakes ball games, which were also adopted by later Mesoamerican cultures. The games, played on large stone courts with hard rubber balls, evidently had religious significance, perhaps symbolizing the victory of the god-heroes over death. The losers lost not only the game but also their lives. While the Toltec were not the first to sacrifice humans to the

This ancient Toltec calendar is made up of four glyphs arranged in a square. The calendar was crafted from stone between C.E. 856 and 1250. (The Bridgeman Art Library/Getty Images)

gods, they sacrificed many more people than earlier groups and may have influenced the large-scale carnage practiced by the later Aztecs.

The Toltecs were Nahuatl-speaking people as were the Aztecs. The literal meaning of their name is "reed people," but "Toltec" came to connote a cultured person or craftsperson because of their mastery of stone and metal arts. They are famous for gigantic Atlantes statues, carved from huge stone columns, which are believed to depict Toltec warriors.

Sculptures depicting Chac-Mool, the Toltec rain god, are found at many Toltec sites. The god is often portrayed as a reclining man with his knees bent and his head and shoulders raised off the ground, holding a bowl over his abdomen. These figures served as altars, and the bowls often held human hearts that were sacrificed to the gods.

No one knows precisely what happened to the Toltec. In about C.E. 1200, the city of Tula was destroyed, probably by a group of warlike nomads known as Chichimecs. The later Aztecs admired Toltec culture and claimed to be descendants of the Toltec warriors. The Aztec concept of a warrior elite also likely was borrowed from the earlier culture. The Aztec even plundered Tula for material to build their cities, unfortunately destroying much valuable archeological evidence as a result.

See also: Aztec Civilization; Mayan Civilization; Olmec Civilization; Teotihuacán.

FURTHER READING

Davies, Nigel. *The Toltec Heritage: From the Fall of Tula to the Rise of Tenochtitlan*. Norman: University of Oklahoma Press, 1979.

Tools and Weapons

The natives of North America made few tools or weapons of metal, except for copper, which was used most often by Native Americans of the Great Lakes region and by the Inca. Instead, most objects crafted by ancient Native American peoples were fashioned out of stone, wood, and animal parts such as skin, bone, antlers, and sinew.

Colin F. Taylor, in his book *Native American Weapons* (2001), identifies five major categories of weapons: those used for striking, cutting, piercing, defensive purposes, and those whose purpose was symbolic. Weapons that strike, cut, and pierce were also used as tools to butcher animals, grind flour, and till land.

STRIKING TOOLS

Among the striking tools and weapons were clubs of various shapes, sizes, and materials. Many different culture groups made what archeologists refer to as monolithic clubs, that is, clubs entirely crafted from stone—usually flint or jasper. Some of these stone clubs were very beautifully crafted, leading to speculation that they were intended primarily for ceremonial use. Large numbers of these stone clubs have been unearthed in the southeastern United States and on the northwest coast.

Found throughout the Americas are clubs with stone heads and wooden handles. The stone heads were made of flint or chert (a gray or brown sedimentary rock) and were generally round or oblong. There were two primary methods of attaching the stone heads to wooden shafts. Sometimes the top parts of the shafts were shaved thin and wrapped around the stones, into which grooves had been carved. The shafts were then fastened to the head with rawhide strips. Alternatively, the shafts could be inserted into holes cut into the stone and fastened with rawhide.

Many clubs were made entirely of wood. Some were rough-hewn balls attached to sticks; others were beautifully carved, with the club heads set at various angles to the shaft. Clubs reserved for

ANCIENT WEAPONS

Clovis Points

Clovis points are the earliest arrow or spearheads discovered in North America, made from 9,000 to 15,000 years ago and named after the New Mexican city where they were found. These distinctive projectile heads were made by the first people known to live in North America, also referred to as Clovis.

The earliest examples of Clovis points were discovered in the southeastern portions of the United States, but specimens have been found throughout the continent. Clovis points are usually about three inches long (7.6 cm), but range in length from one (2.5 cm) to six inches (15.2 cm). They are auriculated, which means that they have earlike projections from the base, and fluted, which refers to a method of removing flakes of stone from the projectile in long narrow channels. Clovis points are the only projectiles found in America with fluting. The widest part of the blade is about a third of the way up. Clovis points were made primarily of chert, flint, chalcedony, and jasper.

The Clovis point was hafted, or attached to a short wooden spear. At the point where the hafting occurred, the point was ground down so that the tip of the shaft fit into the indentation. The haft was then secured to the projectile with hide or sinew.

ANCIENT WEAPONS

The Self-Bow

No one knows when the bow and arrow was first used, but many archeologists believe that it was a relatively late invention, first used in the Americas in about 1000 C.E. There were two kinds of bow prior to the seventeenth century C.E. One was the self-bow, made of a single piece of highly elastic wood, often hickory. (In this context, "self" refers to the fact that the bow is made of a single piece of wood.) East of the Mississippi River, this was the only kind of bow that was made. These bows might be as long as six feet (1.8 m). The reinforced bow was smaller, about 45 inches long (114 cm), and covered with a sheet of sinew (animal tendons); the sinew rather than the wood ensured the elasticity of the bow.

Despite the simplicity of its construction, the self-bow was a deadly weapon in the hands of an experienced archer. Europeans discovered that arrows fired by a self-bow could penetrate even steel plate armor. Although Native Americans eventually adopted firearms as their weapons of choice, the bow and arrow remained in widespread use until the late nineteenth century C.E.

ceremonial use might be carved and decorated to look like animals or beaked birds. Some clubs were shaped like gun stocks, flattened, slightly angled, and wider at one end than the other. Others resembled mallets. Some clubs had knife blades inset on one or both sides of the club head.

Probably the best-known Native American striking weapon is the tomahawk. The word *tomahawk* comes from the Algonquian *tamahak* ("cutting instrument") and is used to describe a hatchet-like tool. Original tomahawks were made of stone and wood, but after European contact, the heads were made of metal. Tomahawks were used for cutting and chopping, in warfare, and for rituals and ceremonies, as a symbol of leadership.

Many Native American groups smoked tobacco and crafted a variety of pipes to do so. Some tomahawks, in fact, were made into pipes, with a blade at one end and a bowl at the other. These pipe-tomahawks often served as gifts to seal alliances. Other styles of pipes, including **effigy** pipes carved into animal shapes, were made from stone, ceramics, and wood or antlers. Peace pipes of the Sioux and other Plains tribes were made from a hollowed-out wooden stem attached to a clay bowl. Peace pipes are ceremonial pipes that were often smoked by former enemies who had settled their disagreements.

CUTTING TOOLS

Cutting tools and weapons made by ancient Native Americans included scrapers, saws, and knives that were used for tasks including butchering meat, preparing hides, felling trees, and carving wood. Cutting weapons were fashioned using a method

These spears were made by people of the Anasazi culture, which flourished from C.E. 700 to 1200 in the American Southwest and then disappeared. The spearheads were knapped from stone, then attached to the wooden hafts with sinew or strips of rawhide. (Werner Forman/Art Resource, NY)

known as flaking or flint knapping, in which a stone tool was used to flake off pieces of flint, chert, or obsidian in order to make razor-sharp edges on one or both sides of an oblong piece of stone. After the arrival of Europeans, Native Americans made knives and scrapers from various metals. They also made sheathes for knives of elaborately beaded animal hides.

Piercing tools included lances, long wooden shafts with stone tips, and arrows, smaller wooden shafts tipped with arrowheads—perhaps the most prevalent **artifact** in America, still found today in many parts of the country. Lances and arrows were used for both hunting and warfare. During combat, Native Americans, tended not to throw the lance, but to stab an opponent with it.

Native Americans also invented various tools to help them throw projectiles farther, including blow tubes, slings, and the *atlatl,* a long piece of wood that was grooved to hold a spear called a dart. The atlatl helped to propel the spear farther than it could have gone without assistance.

DEFENSIVE WEAPONS

Defensive weapons included shields and various forms of body armor. Eskimos made body armor from bone and ivory; other groups, from the Navajo to the Mohawk, used the hides of various animals to protect warriors in battle. Shields were both rectangular and round and crafted of hides, basketry, wood, or bark. Tribes such as the Coeur d'Alène, in the area of present-day Idaho, made five-foot-long shields from elk hides, which they decorated with elaborately painted designs.

See also: Archeological Discoveries; Aztec Civilization; Technology and Inventions.

FURTHER READING

Kessel, William B., and Robert Wooster, eds. *Encyclopedia of Native American Wars and Warfare.* New York: Facts On File, 2005.

Taylor, Colin. *Native American Weapons.* Norman: University of Oklahoma Press, 2001.

Totems

Totems are animals, plants, or other objects—or representations of animals, plants, or objects—that serve, among traditional people, as the symbol of a family or clan and may be revered as an ancestor to the clan. Ancient Native American tribes of the Northeast built huge poles, often made of single trees, elaborately carved with totems, or representations of animals sacred to them. These totem poles served as visible representations of their family histories.

Tribal groups, especially those that practice **animistic** religions, have totems, animals whose spirits are believed to be connected with an individual or clan. Many Native American initiation ceremonies, called "vision quests," involve a young person seeking to discover his or her own totem. A young man, for example, may dream over and over of a bear, encounter a bear in the woods, and, thus, proclaim the bear as his totem. Native Americans do not believe that they choose their totems; rather, they believe the totems choose them.

The word *totem* comes from the Algonkquian word *ototeman,* which indicates a blood relationship between brothers and sisters who have the same mother. Peter Jones, a Methodist missionary and Ojibwa chief, who published the first accurate report about totems in the mid-nineteenth century C.E., wrote that the Great Spirit gave totems to each clan to remind the members that they are related to one another and may not intermarry. The idea of a totem as the guardian spirit of an individual in animal form is a mistaken interpretation

This detail from a Haida totem pole highlights many of the characteristics of Haida style—intricate carving, elaborate design, and flowing lines. Haida poles were typically painted red, black, and turquoise, as in this example. (Stuart Dee/Photographer's Choice/Getty Images)

introduced by Europeans in the late eighteenth century C.E.

Unquestionably, the most famous totems are the totem poles carved by Native Americans of the Pacific Northwest. These poles are found wherever the giant red cedar trees grow, from southeast Alaska, through British Columbia, south to the Olympic Peninsula of Washington state. The most skilled and famous of the totem pole makers are the Haida people.

Although the tradition of totem pole carving is ancient, there are no ancient examples in existence because most poles last fewer than 100 years. Moreover, Native Americans generally do not make any attempt to preserve or repair the poles but allow them to be subject to the forces of nature. As all other living things die, so do totem poles. The red cedar from which the poles were carved was a particularly good wood for longevity because it has a natural water and disease resistance. Left untreated, it eventually rots.

Early European settlers believed that Native Americans "worshipped" the poles, which led Christian missionaries to preach against them and to destroy many. However, totem poles were never worshipped. Actually, they had many uses and meanings. Totem poles have been described as being like family crests, three-dimensional family albums, and "billboards" for families, which allow them to show off their wealth.

The animal and human figures carved into the poles were the totems of a family and its individual members. Creatures often found on totem poles include Raven, Bear, Eagle, Killer Whale, Beaver, and Thunderbird, and their designs are somewhat standardized from area to area. The Bear always sticks out his tongue, for example, and the Beaver has very large teeth and carries a stick.

The carving of totem poles is still practiced today by artisans in the Northeast. The work of many of these traditional artists can be viewed on the Internet.

See also: Art and Architecture; Myths and Legends; Potlatch.

FURTHER READING

Kramer, Pat. *Totem Poles*. Alberta, Canada: Altitude Publishing, 2004.

Vinland

The name given by Viking explorers to a land mass west of Greenland that, according to Norse sagas, marked the earliest European settlement of North America. Although modern excavations have located evidence of early Viking habitation in eastern Canada, the precise location of the place known as Vinland remains uncertain.

Scholars believe that the first Norseman to see the North American coast was the merchant Bjarni Herjólfsson who was blown off course on a trip from Greenland to Iceland in C.E. 985 or 986.

GREAT LIVES

Leif Eriksson

Although it was believed for many years that Christopher Columbus was the first European to discover the Americas, it now seems clear that the Viking Leif Eriksson, son of Erik the Red, arrived in Newfoundland 500 years before Columbus arrived in the Bahamas.

Eriksson was born in Iceland in about C.E. 960. When he was 12 years old, his father was banished as punishment for murder. Having heard rumors of lands to the West, Erik set sail with his entire family and a group of colonists. Within a few days, the ship arrived on the shores of a large island, which Erik named Greenland. It was here that Eriksson grew up.

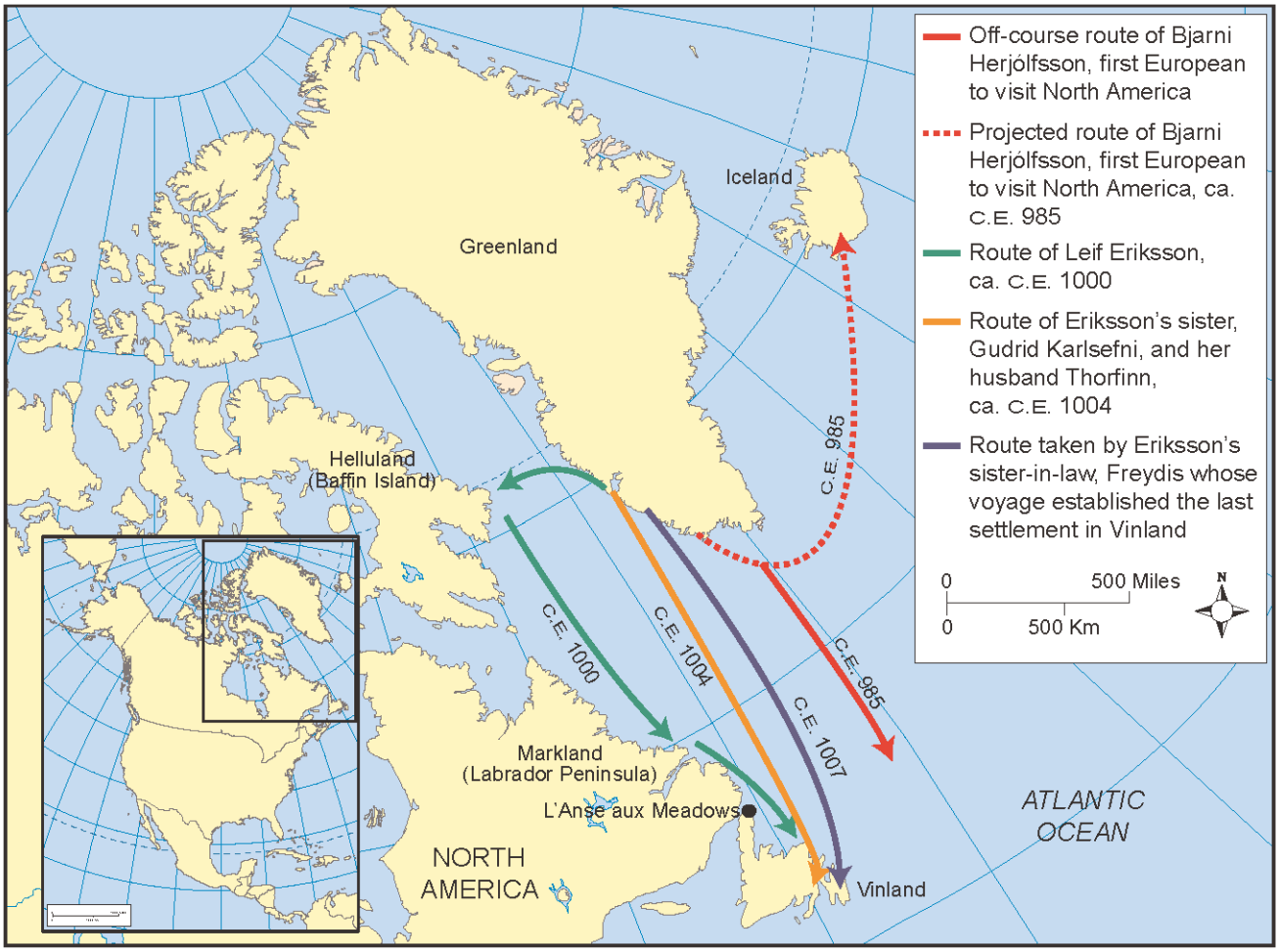
At the age of 24, Eriksson sailed to Norway as the captain of a crew of 14 men. While in Norway, he met with King Olav I, who liked the young man and invited him to stay at his court. During the year he spent in Norway, Eriksson converted to Christianity. When he returned to Greenland, he brought a priest with him to help spread Christianity there.

Restless, Eriksson decided to set sail again in about C.E. 1000, having heard stories of lands yet farther west from a merchant, Bjarni Herjólfsson. Eriksson and his crew of 35 sailed north up the coast of Greenland and then 600 miles west to the new land. Erikisson called this new place Vinland and returned to Greenland laden with timber and grapes.

This was to be Eriksson's last voyage. After his father's death in about C.E. 1001, Eriksson had to take over his father's duties as head of the Greenland colonies. Eriksson died in about C.E. 1025.

VINLAND, CA. 1000 B.C.E.

Although no one really knows the exact locations of the places described by Viking explorer Leif Eriksson and later related in the Norse Sagas, many archeologists believe that Eriksson landed first on Baffin Island and that Vinland was Newfoundland. Evidence of Norse settlement has been found in L'Anse aux Meadows in that province, making it the first European settlement of North America. This map also shows the various routes taken by the Viking explorers of the New World.



Herjólfsson, who never landed, told his story to Leif Eriksson, who set out to explore the new land in about C.E. 1000. Eriksson named three sites in North America: *Helluland* ("flatstone land"), most likely Baffin Island, the largest island in the Canadian Arctic; *Markland* ("woodland"), believed to be the Labrador Peninsula; and *Vinland* ("wine land"), generally believed to be Newfoundland. Eriksson returned to Greenland from his first trip to Vinland carrying grapes and logs, a scarce commodity in treeless Greenland.

Over the next 10 years, Viking sailors from Greenland made at least three more voyages to North America. Eriksson's brother Thorvald and his cohorts lived in Vinland for about two years and were the first Europeans to encounter Native Americans, whom the Vikings called Skraelings. In fact, Thorvald was killed during an encounter with natives. Eriksson's sister-in-law Gudrid and her husband Thorfinn Karlsefni also settled in Vinland, but were also driven away by hostile encounters with the natives. The final attempt at Viking settlement of

Vinland ended in the murder of all of the colonists at the hands of Eriksson's sister-in-law, Freydis, and her husband, Thorvard.

In the early C.E. 1960s, explorer Helge Ingstad and his wife Anne Stine, an **archeologist**, excavated a Viking site in Newfoundland called "L'Anse aux Meadows (Méduses)," which means "Jellyfish Cove" in French. Although it is clear that there was a Norse settlement at L'Anse aux Meadows, it is not at all clear that this is the land Eriksson called Vinland. Some historians argue that Eriksson was explicit in his description of a land where grapes were plentiful, and they note that grapes never grew in Newfoundland. Thus, the exact location of Vinland is still unknown. Many believe that Vinland was located in present-day Massachusetts, perhaps near Cape Cod.

There is one **artifact** of Norse settlement in North America that has created great controversy: A map of Vinland, supposedly drawn in the fifteenth century C.E. and first published by Yale University in 1965. Dating of the map is crucial because, if it is as old as some believe, it may even have been known to Columbus *before* his voyage to the New World. The current verdict of most scientists who have studied the map is that it is a forgery, but others contend that further study is still warranted.

See also: L'Anse aux Meadows.

FURTHER READING

Barnes, Geraldine. *Viking America: The First Millennium*. Cambridge: D.S. Brewer, 2001.

Weapons

See Tools and Weapons.

Woolly Mammoth

See Mammoths.

Writing

See Language and Writing.

Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationships A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretations/analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history of science and technology Study of the evolution of scientific discoveries and technological advancements

history, cultural An analysis of history in terms of a people's culture, or way of life, including investigating patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political An analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remain consistent or show marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radio-carbon dating A test for determining the approximate age of an object or artifact by measuring the number of carbon 14 atoms in that object

social history See history, social

Key Terms Found in A to Z Entries

agglutinative Referring to a language in which linguistic elements are combined to form words

animistic General belief that everything, including inanimate objects, possesses a soul or a spirit

archeologist A scientist who studies prehistoric people and their culture

aristocratic Belonging or referring to a hereditary ruling class, whose wealth is generally based on land and whose power is passed from one generation to another

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament

artisan A skilled craftsperson who practices a trade, making objects by hand or with hand tools

caucasoid A term used to describe the race of humans from Europe, North Africa, and the Middle East

codex (pl. codices) An ancient manuscript

culture groups A term used to describe native North American groups that did not live in a defined territory but shared certain values, practices, and beliefs as opposed to groups that lived in defined territories and possessed sophisticated social organizations, such as the Aztec of Mesoamerica

effigy A small sculpture of a person or animal

egalitarian Characterized by social equality

equinox Literally "equal night"; an astronomical term referring to the two days each year in which daylight and darkness are approximately equal; usually March 21 (spring equinox) and September 21 (autumnal equinox)

frieze A long band of painted or sculpted decoration on a wall usually above eye level or near the top of the structure

geochronologist Someone who studies how to measure geological time, a scale used by geologists and other scientists to measure the relationships among events that have occurred in the history of the earth

glyph A pictorial symbol that represents a specific word or a sound in a written language, often incised or engraved into a surface

hierarchical Describing an organization, especially of persons, that ranks people by authority or importance; societies that are hierarchical have distinct social classes, some of which are considered superior to others

hieroglyph Picture or symbol representing a word, syllable, or sound; refers primarily to Egyptian writing but is also used to refer to the Mayan and Aztec writing systems

matrilineal A social system in which descent is traced through the mother's line

megafauna Very large species of animals that are now extinct, for example, mammoths, mastodons, 2,000-pound giant armadillos, 300-pound beavers, bison, saber-toothed tigers, and 1,500-pound short-faced bears

Mesoamerica A region extending from central Mexico to Costa Rica that was home to several great pre-Coluombian civilizations

microlithic "Small stone"; refers to small tools made by early humans

mitochondrial DNA A form of DNA found outside the nucleus of the cell; mitochondrial DNA does not

change much from parent to offspring and can be used by scientists to trace relationships back hundreds of generations

monogamy The practice of taking a single spouse

monograph A scholarly paper, usually on a single subject

morpheme The smallest unit of language that carries meaning

pantheistic The belief that "God is all, and all is God"; that the universe is identical with God

petroglyph An image carved or painted on rock

polygamy The practice of taking more than one spouse

polysynthetic A term used to describe a language in which elements are strung together to form single words that function as sentences do in English; such languages have very long words

polytheistic Praying to a number of deities, often representations of natural forces, such as the rain or the wind

relief When referring to a sculpture on a flat background in which the figures project partially from the background

shaman Sometimes referred to as a "medicine man"; someone who acts as a link between the material and spiritual world

solstice An astronomical term referring to days when the earth is at the nearest and farthest distance from the sun; the summer solstice is usually June 21 and the winter solstice is December 21

stratified Characterized by division into different orders or levels

tribute A payment from one nation or group to another, usually to acknowledge submission

Selected Bibliography

Abrams, Elliott Marc. *How the Maya Built Their World: Engetics and Ancient Architecture*. Austin: University of Texas Press, 1994.

Adams, Richard E. W. 1991. *Prehistoric Mesoamerica*. Norman: University of Oklahoma Press.

"The Adena People: Moundbuilders of Kentucky." Accessed 20 Aug 2006. http://www.archaeologychannel.org/content/video/adena_300k_w.html.

Alcina Franch Jose, *Pre-Columbian Art*. New York: Abrams, 1983.

Allen, Catherine. *The Hold Life Has: Coca and Cultural Identity in an Andean Community*. Washington, DC: Smithsonian Institution Press, 1988.

"Anasazi." Accessed 20 Aug 2006. http://www.cliffdwellingmuseum.com/anasazi.htm.

Anton, Ferdinand. *Ancient Mexican Art*. New York: G.P. Putman's Sons, 1969.

"Archaeology of the Tundra and Arctic Alaska." Accessed 20 Aug 2006. http://www.nps.gov.akso/akarc/arctic.htm.

"ASU Archaeologist Discovers Possible Key to Mysteries of the Western Hemisphere's First Metropolis." Accessed 20 Aug 2006. http://www.sciencedaily.com/print/php?url=/realeases/1998/10/98102808o108.htm.

"The Aztecs: A Pre-Columbian History." Accessed 20 Aug 2006. http://www.yale.edu/ynhti/curriculum/units/1999/2/99.02.01.x.html.

Badner, Mino. *A Possible Focus of Andean Artistic Influence in Mesoamerica*. Washington, DC: Dumbarton Oaks, 1972.

Baker, Tony. "The Clovis First /Pre-Clovis Problem." Accessed 20 Aug 2006. http://www.ele.net/art_folsom/preclvis.htm.

Barnes, Geraldine. *Viking America: The First Millenium*. Cambridge, UK: D.S. Brewer, 2001.

Bauer, Brian. *The Development of the Inca State*. Austin: University of Texas Press, 1992.

Beck, Mary Giraudo, and Martin Oliver. *Potlatch: Native Ceremony and Myth on the Northwest Coast*. Portland, OR: Alaska Northwest Books, 1993.

Benson, Elizabeth P. *The Mochica. A Culture of Peru*. New York: Praeger, 1972.

Berlo, Janet Catherine, ed. *Art Ideology, and the City of Teotihuacan. A Symposium at Dunbarton Oaks*. Washington DC: Dumbarton Oaks, 1992.

Bernal, Ignacio. *The Olmec World*. Berkeley: University of California Press, 1969.

Berrin, Kathleen, and Esther Pasztory. *Teotihuacan: Art from the City of the Gods*. San Francisco: Fine Arts Museums of San Francisco, 1988.

Betanzos, Juan de. *Narrative of the Incas. From the Palma de Mallorca Manuscript, 1551–57*. Trans. Ronald Hamilton and Dana Buchanan. Austin: University of Texas Press, 1996.

Blerhorst, John. *The Mythology of Mexico and Central America*. New York: Quill, 1992.

Brody, J.J. *The Anasazi: Ancient Indian People of the American Southwest*. New York: Rizzoli, 1990.

Bruhns, Karen Olsen. 1994. *Ancient South America*. Cambridge, UK: Cambridge University Press, 1994.

Burger, Richard L., and Lucy C. Salazar, eds. *Machu Picchu: Unveiling the Mysteries of the Incas*. New Haven, CT: Yale University Press, 2004.

Burgoyne, Thomas H. *The Light of Egypt or Science of the Soul and the Stars*. Kila, MT: Kessinger, 2003.

Campbell, Joseph. *Historical Atlas of World Mythology*. Vol 2. *The Way of the Seeded Earth*. New York: Harper & Row, 1989.

Campbell, Lyle. *American Indian Languages: The Historical Linguistics of Native America*. New York: Oxford University Press, 2000.

Ceaton, P.F. *American Indian Inventions*. Pittsburgh, PA: Ceshore Publishing, 2002.

Chase, Diane Z., and Arlen F. Chase, eds. *Mesoamerican Elites: An Archaeological Assessment*. Norman: University of Oklahoma Press, 1992.

"Civilizations in America." Accessed 20 Aug 2006. http://www.wsu.edu:8080/~dee/CIVAMRCA/CIV.HTM.

Coe, Michael. *The Jacquar's Children: Pre-Classical Central Mexico*. New York: Museum of Primitive Art, 1965.

Coe, Ralph T. *Sacred Circles: Two Thousand Years of North American Indian Art*. London: Arts Council of Great Britain, 1976.

Conn, Richard. *Circles of the World: Traditional Art of the Plains Indians*. Denver, CO: Denver Art Museum, 1982.

Cordell, Linda S. *Ancient Pueblo Peoples*. Washington, DC: Smithsonian Institution and St. Remy Press, 1994.

Cordell, Linda. *Archaeology of the Southwest*. Philadelphia: Academic Press, 1997.

Daltroy, Terence N. *The Incas (The Peoples of America)*. London: Blackwell, 2003.

Davies, Nigel. *The Toltec Heritage: From the Fall of Tula to the Rise of Tenochtitlan*. Norman: University of Oklahoma Press, 1979.

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1999.

Diehl, Richard A. *The Olmecs: America's First Civilization (Ancient People and Places)*. London: Thames and Hudson, 2004.

Dillehay, Tom D. "Exploring South America." Accessed 20 Aug 2006. http://www.archaeology.org/9901/abstracts/samerica.html.

Dixon-Kennedy, Mike. *Native American Myth and Legend*. New York: Sterling, 1998.

"Domestication of Maize." Accessed 20 Aug 2006. http://www.mnsu.edu/emuseum/prehistory/ancienttech/maize.html.

Donnan, Christopher B., and Carol J. Mackey. *Ancient Burial Patterns of the Moche Valley, Peru*. Austin: University of Texas Press, 1978.

Donnan, Christopher. *Ceramics of Ancient Peru*. Los Angeles, CA: Fowler Museum, 1992.

Emerson, Thomas E., and Barry Lewis, eds. *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*. Chicago: University of Illinois Press, 2000.

Equiano, Olaudah. *The Interesting Narrative of the Life of Olaudah Equiano: Written by Himself*. Ed. Robert J. Allison. New York: Bedford/St. Martin's Press, 2006.

Erdoes, Richard, and Alfonso Ortiz. *American Indian Myths and Legends*. Pantheon: New York, 1984.

Erdsieck, Jessica, "Encounters with the Forces of Pepo Shamanism and Healing in East Africa," *Tanzanet Journal* (vol. 1, no. 1), December 2001.

Fagan, Brian M. *Ancient North America*, 4th ed. London: Thames and Hudson, 2005.

Fagan, Brian M. 1991. *Kingdoms of Gold, Kingdoms of Jade: the Americas Before Columbus*. London: Thames and Hudson, 1992.

Falola, Toyin. *Orisa: Yoruba Gods and Spiritual Identity in Africa and the Diaspora*. Lawrenceville, NJ: Africa World Press, 2006.

Feest, Christian F. *Native Arts of North America*. New York: Thames and Hudson, 1992.

Foster, Michael S., and Phil C. Weigand, eds. *The Archaeology of West and Northwest Mesoamerica*. Boulder, CO: Westview Press, 1985.

Freidel, David, and Linda Schele. *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: Harper, 1992.

Freidel, David A., Linda Schele, and Joy Parker. 1993. *Maya Cosmos: Three Thousand Years on the Shaman's Path*. New York: W. Morrow, 1993.

Frison, George et al. *The Fenn Cache: Clovis Weapons and Tools*. Salt Lake City: University of Utah Press, 2002.

Frison, George C. *Prehistoric Hunters of the High Plains*. Philadelphia: Academic Press, 1991.

Gumerman, George J. (ed). *Themes in Southwest Prehistory*. Santa Fe, NM: School of American Research Press, 1994.

Hayden, Brian. *Archaeology: The Science of Once and Future Things*. New York: W.H. Freeman and Co, 1993.

Heyden, Doris, and Paul Gendrop. *Pre-Columbian Architecture of Mesoamerica*. New York: Electa/Rizzoli, 1988.

"History of the American Indians." Accessed 20 Aug 2006. http://www.historyworld.net/textonly/printgpage.asp?type=histories&nid=ab05$pid?.

"Hunters of the Arctic." Accessed 20 Aug 2006. http://web.clas.ufl.edu/users/sassaman/pages/classes/ant3153/ANT3153–9.htm.

"Incas." Accessed 20 Aug 2006. http://www.usu.edu/~dee/CIVAMRCA/INCAS.HTM.

Ingstad, Helge, and Anne Stine Ingstad. *The Viking Discovery of America: Excavation of a Norse Settlement in L'Anse aux Meadows, Newfoundland*. New York: Checkmark Books, 2001.

James, Peter, and Nick Thorpe, *Ancient Mysteries,* New York: Ballentine, 1999.

Johnson, George, "Social Strife May Have Exiled Ancient Indians," *New York Times,* Aug 20, 1996.

Josephy, Alvin M., Jr. *500 Nations: An Illustrated History of North American Indians*. New York: Gramercy, 2002.

Keatinge, Richard W., ed. *Peruvian Prehistory*. Cambridge, UK: Cambridge University Press, 1988.

Keen, Benjamin. *The Aztec Image in Western Thought*. New Brunswick, NJ: Rutgers University Press, 1990.

Korp, George. *The Sacred Geography of the American Mound Builders*. Native American Studies. Lewiston, N.Y: Mellen, 1990.

Kidwell, Clara Sue et al. *A Native American Theology*. Maryknoll. NY: Orbis Books, 2001.

Kidder, Alfred Vincent. *An Introduction to the Study of Southwestern Archaeology*. New Haven, CT: Yale University Press, 1962.

Kitt Chappell, Sally A. *Cahokia: Mirror of the Cosmos*. Chicago: University of Chicago Press, 2002.

Korp, George. *The Sacred Geography of the American Mound Builders*. Native American Studies. Lewiston, NY: Mellen, 1990.

Kosok, Paul. *Life, Land and Water in Ancient Peru*. Long Island, NY: Long Island University Press, 1965.

Kramer, Pat. *Totem Poles*. Alberta, Canada: Altitude Publishing, 2004.

Kubler, George. *The Art and Architecture of Ancient America: The Mexican, Maya, and Andean Peoples*. Harmondsworth, UK: Penguin, 1975.

Langdon, Jean Matheson, and Gerhard Baer, eds. *Portals of Power: Shamanism in South America*. Albuquerque, NM: University of New Mexico Press, 1992.

Lapiner, Alan. *Pre-Columbian Art of South America*. New York: Abrams, 1976.

Lathrap, Donald Ward. 1975. *Ancient Ecuador: Culture, Clay and Creativity, 3000 BC to 300 BC*. Chicago: Field Museum of Natural History, 1975.

Lee, Jr., Thomas A., and Carlos Navarrete, eds. *Mesoamerican Communication Routes and Cultural Contacts*. Provo, UT: New World Archaeological Foundation, 1978.

Lemonick, Michael D., and Andrea Dorfman, "Who Were the First Americans?" *Time* (March 13, 2006), pp. 44–52.

Levi-Strauss, Claude. *Way of the Masks*. Seattle: University of Washington Press, 1982.

Lipe, William D. "The Southwest," pp. 327–403 in Jesse D. Jennings (ed), *Ancient Native Americans*. New York: W.H. Freeman, 1978.

Lister, Robert H., and Florence G. Lister. *Chaco Canyon, Archaeology and Archaeologists*. Albuquerque: University of New Mexico Press, 1981.

Lumbreras, Luis G. *The Peoples and Cultures of Ancient Peru*. Washington, DC: Smithsonian Institution Press, 1974.

Markman, Roberta, and Peter Markman, *The Flayed God. The Mythology of Mesoamerica. Sacred Texts and Images*. San Francisco, CA: Harper, 1992.

Markman, Peter T., and Roberta H. Markman. *Masks of the Spirit: Image and Metaphor in Mesoamerica*. Berkeley: University of California Press, 1989.

Martin, Joel W. *The Land Looks After Us: A History of Native American Religion*. New York: Oxford University Press, 2001.

McGhee, Robert. *Ancient People of the Arctic*. Vancouver, BC: UBC Press, 2001.

McNair, Peter L., Alan L. Hoover, and Kevin Neary. *Legacy: Tradition and Innovation in Northwest Coast Indian Art*. Vancouver, BC: Douglas and McIntyre, 1984.

"Mesoamerican Writing Systems." Accessed 20 Aug 2006. http://www.ancientscripts.com/mesoamerican.html.

Miles, Barton et al. *Prehistoric America: A Journey Through the Ice Age and Beyond*. New Haven, CT: Yale University Press, 2003.

Millar, Heather. *The Kingdom of Benin in West Africa*. New York: Benchmark Books, 1996.

Miller, Mary Ellen. *The Art of Mesoamerica: From Olmec to Aztec,* 3rd ed. London: Thames and Hudson, 2001.

Miller, Mary Ellen, and Karl Taube. *The Gods and Symbols of Ancient Mexico and the Maya: An Illustrated Dictionary of Mesoamerican Religion*. New York: Thames and Hudson. 1993.

Milner, George F. *The Moundbuilders: Ancient Peoples of Eastern North America*. London: Thames and Hudson, 2004.

Mithun, Marianne et al., Ed. *The Languages of Native North America*. Cambridge, UK: Cambridge University Press, 2001.

Montejo, Victor. *The Bird Who Cleans the World: And Other Mayan Fables*. St. Paul, MN: Curbstone Press, 1992.

Moseley, Michael E. *The Incas and Their Ancestors: The Archaeology of Peru*. New York: Thames and Hudson, 1992.

Murdy, Carson M. "Congenital Deformities and the Olmec Were-Jaguar Motif," *American Antiguity,* vol. 46 (Oct. 1981), 861–71.

Nabokov, Peter, and Robert Easton. *Native American Architecture*. New York: Oxford University Press, 1990.

Nicholson, Irene. 1985. *Mexican and Central American Mythology*. New York: Peter Bedrick Books. 1985.

Nies, Judith. *Native American History: A Chronology of a Culture's Vast Achievements and their Links to World Events*. New York: Ballentine Books, 1996.

Noble, David. *The Hohokam: Ancient People of the Desert*. Santa Fe, NM: School of American Research Press, 1991.

Oliver-Smith, Anthony. *The Martyred City: Death and Rebirth in the Andes*. Albuquerque: University of New Mexico Press, 1986.

Osborne, Harold. *South American Mythology*. Middlesex, UK: The Hamlyn Publishing Group Ltd, 1968.

Parezo, Nancy J. *Navajo Sandpainting: From Religious Act to Commercial Art*. Tuscan: University of Arizona Press, 1983.

Paul, Anne. 1990. *Paracas Ritual Attire: Symbols of Authority in Ancient Peru*. Norman: University of Oklahoma Press, 1990.

Perrin, Michel. *The Way of the Dead Indians: Guajiro Myths and Symbols*. Austin: University of Texas Press, 1987

Piña Chan, Román. *The Olmec: Mother Culture of Mesoamerica*. New York: Rizzoli, 1989.

Plog, Stephen. *Ancient Peoples of the American Southwest*. New York: Thames and Hudson, 1997.

Porterfield, Kay Marie, and Emory Dean Keoke, *American Indian Contributions to the World: 15,000 Years of Inventions and Innovations*. New York: Facts On File, 2001.

Price, T. Douglas, and Gary M. Feinman. *Images of the Past*. Mountain View, CA: Mayfield Publishing Company, 1997.

Pringle, Heather. *In Search of Ancient North America: An Archaeological Journey to Forgotten Cultures*. New York: Wiley, 1996.

Pritzer, Barry M. *A Native American Encyclopedia: History, Culture, and Peoples*. New York: Oxford University Press, 2000.

"The Rise and Fall of Mammoths in North America." Accessed 20 Aug 2006. http://www.royalbcmuseum.bc.ca/hhistory/mammoth/mammothsotyr.html.

Roberts, David. *In Search of the Old Ones*. New York: Simon & Schuster, 1997.

Rouse, Irving. *The Tainos: Rise and Decline of the People Who Greeted Columbus*. New Haven, CT: Yale University Press, 1993.

Rostworowski de Diez Canseco, Maria. *History of the Inca Realm*. Trans. Harry B. Iceland. Cambridge, UK: Cambridge University Press, 1999.

Sawyer, Alan Reed. 1966. *Ancient Peruvian Ceramics: The Nathan Cummings Collection*. New York: Metropolitan Museum of Art, 1966.

Sharer, Robert J. *Daily Life in Maya Civilization*. Westport, CT: Greenwood Press, 1996.

Schele, Linda. *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: Morrow, 1990.

Schele, Linda, and Mary Ellen Miller. *The Blood of Kings: Dynasty and Ritual in Maya Art*. New York: Braziller, 1986.

Smith, Michael Ernest. *The Aztecs (Peoples of America)* London: Blackwell, 2002.

Saloman, Frank, and George L. Urioste. *The Huarochiri Manuscript: A Testament of Ancient and Colonial Andean Religion*. Austin: University of Texas Press, 1990.

Stanish, Charles. *Ancient Andean Political Economy*. Austin: University of Texas Press, 1992.

Steward, Julian H., ed. *Handbook of South American Indians*. New York: Cooper Square Publishers, 1963.

Stone-Miller, Rebecca. *Art of the Andes: From Chavin to Inca*. New York: Thames and Hudson, 1995.

Sugiyama, Saburo. *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology*. Cambridge, UK: Cambridge University Press, 2005.

"Taino: Voices from the Past." Accessed 20 Aug 2006. http://www.pbs.org/wnet/nature/spirits/html/body_body.html.

Taylor, Colin. *Native American Weapons*. Norman: University of Oklahoma Press, 2001.

Tedlock, Dennis, ed. *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. New York: Touchstone, 1996.

Townesend, Richard, ed. *The Ancient Americas: Art from Sacred Landscapes*. Chicago: Art Institute of Chicago, 1992.

Townesend, Richard. *The Aztecs*. Ancient Peoples and Places. London: Thames and Hudson, 1992.

Van Sertima, Ivan. *Blacks in Science: Ancient and Modern*. Piscataway, NJ: Transaction Publishers, 1990.

Vega, Garcilaso de la. *Royal Commentaries of the Incas and General History of Peru (1604)*. Trans. H.V. Livermore. Austin: University of Texas Press, 1987.

Vivian, R. Gwinn. *The Chacoan Prehistory of the San Juan Basin*. Philadelphia: Academic Press, 1990.

Wade, Edwin, and Carol Haralson. eds. *The Arts of the North American Indian: Native Traditions in Evolution*. New York: Hudson Hills, 1986.

West, Frederick Hadleigh. *American Beginnings: The Prehistory and Palaeoecology of Beringia*. Chicago: University of Chicago Press, 1998.

Whitten, Dorothea S. *From Myth to Creation: Art from Amazonian Ecuador*. Champaign: University of Illinois Press, 1966.

Woodward, Susan L., and Jerry N. McDonald. *Indian Mounds of the Middle Ohio Valley: A Guide to Mounds and Earthworks of the Adena, Hopewell, Cole, and Fort Ancient People*. Granville, OH: McDonald and Woodward Publishing, 2002.

Index

Note: **bold** entries indicate glossary term; *t* indicates timeline; *m* indicates map; *p* indicates photo.

A

Adena, 64, 65
  art, 14–15
  burial mounds, xiv, 1
  society and culture, 1–2
  See also Mound Builders
Agglutinative, 48, 111
Agriculture, xiv
  art depicting, 5*p*, 55*p*
  gender and, 32
  hunting-gathering compared with, 38
  irrigation canals, 4, 36, 37, 92, 98
  irrigation systems, 5
  maize. *See* Maize
  slash and burn, 4
  society and, 86
  tobacco, 98–99
  See also specific culture/tribe
Ahau, 88
Aleut language, 47, 47*m*
Algonquian, language, 45, 47–48
Amazon rain forest, xiii
Americas
  discovery of, xiii, xvi
  first human inhabitant theories, 11–12, 23–24, 27, 28, 76
  major cultural sites, 30*m*
  See also Central America; Mesoamerica; North America; South America
Anasazi, xv
  art, 16
  demise, 7–8
  historical periods, 6–7
  kivas, 81, 81*t*
  spears, 104*p*
  writing system, 49*p*
Animacy hierarchy, 46
Animals
  effigy mounds, 35–36
  effigy pottery, 63
  extinction, 28*t*, 39–40, 57, 78
  as funerary objects, 96
  in Nazca drawings, 70
  prehistoric, xiv, 78
  on totem poles, 106
  as totems, 33, 105
  trickster, 68–69
Animistic, 80, 105, 111
Apache, 66, 80
Apos, 41
Aqueducts, 92
Archaic peoples, 78
Archeological discoveries, 9–14
Archeologists, 111
Architecture
  corbel arch, 17
  See also Housing; specific culture/tribe
Arctic regions, art, 16
Arctic Small Tools tradition (ASTt), 71–72
Aristocratic class, 40, 111
Art
  ball players depicted in, 74*p*, 75
  drawings. *See* Drawings
  masks. *See* Masks
  Mesoamerican and South American, 16–18, 74–75, 101, 102
  North American, 14–16, 63
  pottery. *See* Pottery
  See also specific culture/tribe
Artifacts, 111
Artisans, 17, 37, 111
Astronomy, 60, 101
Atahualpa, 42, 42*t*, 87
Atlatls, 7, 39, 92*p*, 93, 105
Ayllus, 31
Aztec, xv–xvi, 20*t*
  agriculture, 4, 20
  art and architecture, 17
  ball games, 94–95
  calendars, 9*p*, 10*t*, 11*m*, 13, 17, 21, 83, 93
  cultural area, 30*m*
  demise, xvi, 22, 81*t*
  family system, 31
  floating gardens, 4, 17, 20
  human sacrifice, 22, 33, 81*t*, 82–83
  land ownership, 31
  language, 48
  laws, 88–89
  map of empire, 21*m*
  marriage, 31
  origin, 18
  political and social organization, 86, 88
  religion and rituals, 21, 55*p*, 81–84
  slavery, 85
  technology and innovations, 92, 93
  Tenochtitlán. *See* Tenochtitlán
  Toltec culture and, 102
  women, 32–33

B

Baffin Island, 108
Bakotahl, 66
Ball games, 94–95
  Aztec, 94–95
  Hohokam, 36
  Mayan, 58, 68
  Mesoamerican, 33, 81
  in myths and legends, 68
  Toltec, 81, 81*t*, 101
Ball players, in Olmec art, 74*p*, 75
Beauty, notions of, 74
Beringia, xiv, 23–24, 39
  Clovis people, 28
  Olmec, 72
  Paleo-Indians, 77*m*
  prehistoric animals, 56
Bingham, Hiram, 10*t*, 12, 52
Birth control, 94
Bison, 16, 24–25, 27, 76
Blood, human. *See* Human blood
Blow tubes, 105
Boats, 72, 94, 97
Body armor, 105
Books, Mayan, 46*t*, 49
Bow and arrow, 39
  Anasazi, 7
  Arctic Small Tools tradition, 72
  Mississippian cultures, 63
Bows, self-bow, 104
Bridges, Incan, 42, 93
Buffalo. *See* Bison
Burden basket carrier, 37
Burial mounds, 64
  Adena, xiv, 1, 65
  Cahokia, 26
  Hopewell, 65
  Mississippian, xv, 3, 9–10, 11*m*, 61, 62*m*
  social class and, 3
  See also Burial sites; Funerary objects; Pyramids
Burial sites
  Moche woman, 10*t*, 11*m*, 14
  Teotihuacán, 13–14
  See also Burial mounds; Funerary objects; Pyramids

C

Caciques (Taino social class), 90
Cactus, Aztec and, 18
Cactus Hill, Virginia, 11, 11*m*, 77*m*
Cahokia, xv, 25–27, 61, 62*m*, 65, 81*t*
Calendars
  Aztec, 9*p*, 10*t*, 11*m*, 13, 17, 21, 83, 93
  Mayan, 46*t*, 60, 83, 93
  Olmec, 73
  Stonehenge, 26
  Tiwanaku, 98
  Toltec, 102*p*
  Woodhenge, 26
Calpulli, 31
Canals
  irrigation, 4, 36, 37, 92, 98
  as streets, 17, 19, 94
Canoes, 94
Caribbean Islands, 90
Casas, Bartolomeo de las, 91
Caucasoid, 24, 111
Cause-and-effect relationship, 60, 110
Centeol (Aztec Corn God), 55*p*
Central America
  archeological discoveries, 12–14
  language groups, 47–48
Ceremonies, 33
  Potlatch, 78–79
  sweat lodge, 33, 81
  See also Rituals
Chac-Mool, 102
Chaco Canyon, New Mexico, 7, 16, 31, 81
Chalchihuitlicue (god of growth), 82
Chichén Itzá, Mexico, 17, 59*p*, 60, 60*t*, 94, 101
Chiefdoms, 86
Chiefs, clans and, 29
Chile, Monte Verde, 10*t*, 11*m*, 12, 24, 77*m*
Chinampas, 4, 17, 20
Chronological thinking, 93, 110
Ciudadela, 96
Clan systems. *See* Kinship systems
Cliff dwellers, 7

Cliff Palace, 8*p*
Climate change
  Beringia, 23
  extinction, 28*t*, 57, 78
  Hohokam, 38
  ice ages. *See* Ice ages
Cloth, woven. *See* Woven cloth
Clovis first debate, 11
Clovis people, 28, 28*t*, 76
Clovis points, xiv, 10, 11*m*, 27–28, 76, 77*m*, 103
Clubs (weapons), 103–104
Coatlicue statue, 11*m*, 13
Codex, 111
Codexes, Mayan, 46*t*, 49
Columbus, Christopher, xvi, 90, 98
Condor I, 71
Confederation, 86–87
Contraceptives, 94
Corbel arch, 17
Corn. *See* Maize
Corn God Centeol (Aztec), 55*p*
Corn Mother, Penobscot hero story, 67
Cortés, Hernán
  destruction of artifacts, 13
  destruction of Tenochtitlán, 19, 22
  European exploration and, xvi
  Moctezuma and, 20, 81*t*
  as Quetzalcoatl, 101
Coyote trickster, 68, 69
Creation stories, 66
Criminals, 88–89
Crops. *See* Agriculture
Cultural history, 76, 110
Culture and traditions
  beliefs, ceremonies and taboos, 33–34
  family and kinship, 29–31
  marriage, 31
  role of women, 32–33
  See also specific culture/tribe
Culture groups, 111
Cutting tools, 104–105

D
Dakota, Seven Council Fires, 87
Death rituals, 33
Death stories, 69
Deities
  corn, 55*p*, 67
  fertility, 68
  jaguar, 74
  life and death, 13
  moon, 33
  rain, 74, 80, 82, 102
  serpent, 74, 81
  sun, 13, 33, 40, 81
  supreme, 81, 84
  war, 81
  weather, 80
  wind, 80
  See also Religion
DNA, mitochondrial, 12, 111
Drawings
  geoglyphs, 70–71
  Nazca, 70–71
  petroglyphs, 31, 50, 70, 112
  rock, 50
Dresden Codex, 46*t*, 49

E
Eagles, 81*t*, 82
Earth, destruction of in myths, 66, 83
Earthworks mounds. *See* Mounds
Eastern Woodland tribes. *See* Woodland groups
Economic history, 79, 110
Effigy, 111
effigy mounds, 35–36, 64, 65
Effigy Mounds Park, Iowa, 65
effigy pipes, 14, 15*p*, 104
effigy pottery, 63
Egalitarian societies
  Adena, 1
  defined, 111
  hunter-gather groups, 86
  Pueblo Indians, 8
  Teotihuacán, 96
End of the world, 69, 81*t*
Environmental change. *See* Climate change
Equinox, 26, 60, 65, 101, 111
Era, 110
Eriksson, Leif, xvi, 50, 51, 107–109, 108*m*
Eskimo-Aleut language family, 47*m*
Eskimos, body armor, 105
Etchings, acid, 37
Etowah, 62*m*

F
False Face Society, 15
Family and kinship, 29–31
Farming. *See* Agriculture
Feather work, 17
Feathered Serpent. *See* Quetzalcoatl
Fertility, 68, 94
Flint, 104
Float harpoon, 72
Floating gardens, 4, 17, 20
Flood, creation myth theme, 66
Flying, 71
Folsom points, xiv, 27, 76, 77*m*
Fort Ancient culture, 36
Fremont, writing system, 49*p*
Friezes, 17, 111
Frogs, 15*p*, 68
Funerary objects
  Adena, xiv
  corn, 3
  Mayan and Teotihuacán, 14
  Mississippian, xv, 61–62
  Moche woman, 14
  social stratification and, 33
  Teotihuacán, 96
  See also Burial mounds; Burial sites

G
Games, ball. *See* Ball games
Gardens, floating. *See* Floating gardens
Gateway of the Sun, 98
Gender nouns, 45–46
Gender roles, 32
Geochronologist, 78, 111
Geoglyphs, 70–71
Ghosts, 80
Gifts, potlatch, 79
Glooscap, 68
Glyphs
  Aztec, 13
  defined, 111
  Mayan, 17, 46*t*, 48, 49, 58
  Mesoamerican writing systems, 48
  Olmec, 73
  Toltec, 102*p*
Gods. *See* Deities
Government, 86–88
  See also Political systems
Grammar, 45–46
Grand Serpent Mound, 62*m*
Grapes, 51, 108, 109
Grave Creek Mound, 1, 65
Graves. *See* Burial sites
Great Kiva, 81
Great North Road, 7
Great Plains
  art, 16
  bison, 24
  cultural area, 30*m*
Great Serpent Mound, 35–36
Grolier Codex, 46*t*, 49

H
Haab (Mayan calendar), 93
Haida, 16, 106*p*
Harpoons, 72, 97
Headdresses, Aztec, 17
Heads, 73, 74, 74*p*
Healers. *See* Shamans
Helluland, 108, 108*m*
Hero stories, 67–68
Hero Twins, 68
Hierarchical societies, 40, 61, 90, 111
Hierarchy, animacy, 46
Hieroglyphic stairway, 17
Hieroglyphic writing, Olmec, 73
Hieroglyphs, 13, 46*t*, 49, 58, 93, 111
Hohokam, 4, 36–38, 92
Hokan-Siouan, language, 47*m*, 48
Hopewell, xiv, 2, 64, 65
  art, 14, 15*p*
  See also Mound Builders
Hopi
  death and end of the world stories, 69
  language, 45, 46
  religion, 80
Hot-air balloons, 71
Housing
  Anasazi, 6–8, 16

cliff settlements, 7
Eastern Woodland tribes, 15
Great Plains tribes, 16
Hohokam, 36, 37–38
Incan, 42, 53
longhouses, 15
Norton tradition, 72
Paleo-Indians, 78
pithouses, 6
pueblos, 6–8, 16
Taino, 90
Thule tradition, 97
tipis, 16
wigwams, 15
Hovenweep National Monument, 7
Human blood
Aztec rituals, 21–22, 82–83
Mayan rituals, 58, 82–83
Mesoamerican ceremonies, 33, 82–83
Human inhabitants, theories of first, 11–12, 23–24, 27, 28, 76
Human sacrifice
Aztec, 22, 33, 81*t*, 82–83
Cahokia, 26
Mayan, 58, 82
Mesoamerican, 33, 81, 82–83
Olmec, 74
Toltecs, 101–102
Human skulls, Aztec wall of, 19, 19*p*
Hunter-gatherers, 38–39

I
Ice ages, xiv, 23, 39–40
Inca, xvi
agriculture, 5, 41, 53
art and architecture, 17–18, 42, 53, 93
civil war, 42, 42*t*
cultural area, 30*m*
demise, 87
empire, 40–41
kinship system, 31
land ownership, 41
laws, 89
lost city of the, 12, 52
Machu Picchu, 11*m*, 12, 52–54
marriage, 31
medical innovations, 93–94
political and social organization, 40–41, 86–88
pottery, 5*p*
public projects, 42
quipu, 43, 43*p*
sacred places, 33
technology and innovations, 92–93
timeline, 42*t*
women, 33
Inca, Sapa, 40, 41, 87
Inscriptions, Temple of (Mayan), 59
Interglacial period, 40
Inuit, 16, 30*m*, 45, 94
See also Thule Tradition
Inupiaq-Inuktitut, language, 47
Iroquois, 15, 29, 32
Iroquois League, 86–87
Irrigation canals. *See* Agriculture

J
Jaguars, 74, 75

K
Kachinas, 80
Kalapuya, trickster stories, 69
Kayaks, 72, 94, 97
Kennewick Man, 10*t*, 11*m*, 12, 24
Kinship systems, 29–32, 33, 86
Kitche Manitou, 80
Kivas, 8, 16, 31, 81, 81*t*
Knorsov, Yuri, 46*t*
Kokomaht, 66
Kuraqa, 87
Kwakiutl, potlatches, 79

L
Labor tax, Incan, 41–42
Lacrosse, 95
Lake Texcoco, 17, 19, 21*m*, 82
Lake Titicaca, 32*p*, 33
Lakota, religion, 80
Lamps, stone, 72
Lances, 105
Land bridge, Beringia. *See* Beringia
Land ownership
Aztec, 31
Inca, 41
Native Americans, 3
Language, 45–46
classifying, 47–48
origins, 46–47
timeline, 46*t*
See also Writing
L'Anse aux Meadows, 50–51, 108*m*, 109
Laws, 88–89
Legends. *See* Myths and legends
Linguistics, 45–46, 47*m*
Longhouses, 15
Louisiana, Poverty Point, 35, 62*m*, 64–65

M
Macehual, 88
Machu Picchu, 11*m*, 12, 52–54, 52*p*
Madrid Codex, 46*t*, 49
Maize
art depicting, 5*p*, 55*p*
cultivation of, 2–3, 54–55
Mississippian cultures and, 61
Penobscot hero story, 67
See also Agriculture
Mamaconas, 33
Mammoths, 56–57, 56*p*
evidence of hunting, 10, 76
extinction, 40, 57
fossils, 11*m*, 57
skeletons, 10*t*
skulls, 10, 10*t*, 11*m*
spear points in, 28
Manco Capec, 42
Marriage, 31, 84
Masks
Arctic, 16
Aztec, 83*p*
cedar, 16
driftwood, 16
Iroquois, 15
Quetzalcoatl, 83*p*
wooden, 15
Matrilineal societies, 3, 32, 62, 111
Maya, xv
agriculture, 4
art and architecture, 17, 60, 101
astronomy, 60
ball games, 58, 68
books, 46*t*, 49
calendars, 46*t*, 60, 83, 93
cultural area, 30*m*
demise, 60
family system, 31
glyphs, 48, 49, 58
historical periods, 57, 60*t*
language, 48, 93
laws, 88
map of empire, 58*m*
marriage, 31
medical innovations, 94
myths and legends, 68, 69
Olmec identified as, 73
political and social organization, 86, 88
religion and rituals, 57–58, 81, 81*t*, 82, 83
sacred places, 33
technology and innovations, 92, 93
Teotihuacán burial sites, 13–14
timeline, 60*t*
tobacco, 98
writing, 46*t*, 48–49, 58–60, 93
Mayeques, 88
Medical innovations, 93–94, 100
Medicine men. *See* Shamans
Megafauna, 56, 78, 111
Mesa Verde National Park, Colorado, 7, 8*p*
Mesoamerica
agriculture, 2, 3, 4
art, 16–18
defined, 111
religion, 33, 81–84
social organization, 86
transportation, 94
writing systems, 45, 48–50
Microlithic tools, 71, 111
Mississippian culture, xv, 3, 36, 61–65
See also Cahokia; Mound Builders
Mit'a (Incan labor tax), 41–42
Mitochondrial DNA, 12, 111
Moche culture, 10*t*, 11*m*, 14
Moctezuma II, 20, 81*t*, 82
Mohawk, 29, 105
Monk's Mound, 25–26, 61
Monogamy, 31, 112

Monograph, 10, 112
Monte Verde, Chile, 10*t*, 11*m*, 12, 24, 77*m*
Moon Pyramid, 13, 96
Morphemes, 45, 112
Mound 72, 26
Mound Builders, 9–10, 63–66
  cultures, 64, 65–66, 86
  social class, 88
  See also Adena; Hopewell; Mississippian culture; Mounds; Poverty Point
Mounds
  burial. *See* Burial mounds
  effigy, 35–36, 64, 65
  map of Mississippian, 62*m*
  Paleo-Indians, 11*m*
  temple, 65, 81*t*
  Viking, 50–51
  See also Mound Builders
Moundsville, West Virginia, 1, 65
Myths and legends, 66–69

N
Nadine, language, 47*m*, 48
Native American Graves Protection and Repatriation Act, 12
Navajo
  language, 45, 46
  religion, 80
  shields, 105
  writing system, 49*p*
Nazca, 70–71
New Fire Ceremony, 83–84
New Mexico
  Chaco Canyon, 7, 16, 31, 81
  Clovis, xiv, 10, 10*t*, 11*m*, 27–28
  Folsom, 27, 76
New World. *See* Americas
Newspaper Rock, 49*p*
Norse tales, 50
North America, xiii
  archeological discoveries, 10–12
  art, 14–16
  Beringia land bridge, xiv
  conquest and colonization, xvi
  kinship systems, 29
  language groups, 47–48
  peoples, xiv, xv, 3, 25
  writing systems, 49*p*, 50
Norton tradition, 71–72
  See also Thule tradition
Nouns, 45–46

O
Olmec, xv, 46*t*, 48, 72–75

P
Pachacuti, 40, 42*t*, 52
Pakal the Great, 59
Paleo-Indians, xiv, 11*m*, 76–78
Pantheistic, 80, 112
Paris Codex, 46*t*, 49
Patterns of continuity and change, 84, 110
Peace pipes. *See* Pipes
Periodization, 57, 110
Petroglyphs, 31, 50, 70, 81, 112
Pictographs, 50
Pipes, 1, 14, 15*p*, 100, 104
  See also Tobacco
Pithouses, 6
Pizarro, Francisco, xvi, 18, 42, 42*t*, 87
Plains Indians. *See* Great Plains
Plumed serpent. *See* Quetzalcoatl
Political history, 86–88, 110
  See also Political systems
Political systems
  Adena, 1
  Aztec, 88
  Incan, 40, 87
  Mayan, 88
  See also Government; Political history
Polygamy, 31, 90, 112
Polysynthetic, 45, 48, 112
Polytheistic, 80, 112
Popol Vuh, 46*t*, 49, 66
Porcupine quills, 14–15
Potlatch, 78–79
Pottery
  Anasazi, 16
  Hohokam, 37
  Incan, 5*p*
  Mississippian, 63
  Norton tradition, 72
Poverty Point, 35, 62*m*, 64–65
Powhatan Confederacy, 87
Progama Machu Picchu, 53
Pueblo Bonita, 7, 16
Pueblos, Anasazi, 6–7, 16
Puppets, 16
Putnam, Frederick Ward, 65
Pyramid of the Sun, 95, 96*p*
Pyramids
  Aztec, 93, 95, 96*p*
  Mayan, 17, 93
  Moon Pyramid, 13, 96
  Olmec, 73
  Tiwanaku, 98
  Toltec, 101
  See also Burial mounds

Q
Quetzalcoatl, Temple of, 19, 96
Quetzalcoatl (plumed serpent)
  Aztec and Olmec deity, xv, 74
  demise of Aztec empire, 20, 81*t*, 82
  mask of, 83*p*
  Toltec deity, 101
Quipu, 43, 43*p*
Quipucamayocs, 43

R
Rabbit Boy, 68
Radio-carbon dating, 36, 76, 110
Rain deities. *See* Deities
Rain forest, Amazon, xiii
Rain forest cultures, 57
Ravens, 16, 68
Relief, 37, 112
Religion, 33, 80–84
  See also Ceremonies; Deities; Rituals; Shamans; Temples; specific culture/tribe
Rituals
  Aztec, 21–22, 82–84
  Central and South American, 33
  death, 33
  healing, 82
  Mayan, 58, 82–83
  Mesoamerican, 81, 82–83
  tobacco used in, 99–100
Roads, Incan, 42, 92
Rock drawings, 50
Rock Eagle effigy mound, 64*p*

S
Sacrifice
  human. *See* Human sacrifice
  human blood. *See* Human blood
Sapa Inca, 40, 41, 87
Sapir, Edward, 45, 46, 47
Self-bow, 104
Serpent deity. *See* Quetzalcoatl
Serpent Mound, Grand, 62*m*
Serpent Mound, Great, 35–36
Seven Council Fires, 87
Shamans, 82
  Adena, 1
  defined, 112
  petroglyphs, 50
  tobacco use, 99–100
  were-jaguar, 75
  women, 32
  See also Medical innovations
Sioux, hero stories, 68, 100
Sipapu, 81
Skeletons, 10*t*, 12
Skulls
  mammoth, 10, 10*t*, 11*m*
  trepanned, 93–94
  wall of, 19*p*, 101
Slavery, 85–86, 91
Sleds, 94
Slings, 105
Smallpox, 22, 87, 91
Smoking. *See* Tobacco
Social history, 76, 110
Social structures
  egalitarian. *See* **Egalitarian** societies
  stratified. *See* **Stratified** societies
Solstice, 26, 60
  defined, 112
  end of the world, 69
  Toltic astronomy and, 101
South America, xiii
  archeological discoveries, 12–14
  art, 16–18
  conquest and colonization, xvi

kinship systems, 29–32
language groups, 48
Spanish colonization, xvi, 18
Spear points, 11*m*
Clovis. *See* Clovis points
Folsom, xiv, 27, 76
Spirits, 33, 80, 82
Spirituality. *See* Religion
Sports, 94–95
Stairway, Mayan hieroglyphic, 17
State systems, 87–88
Steam baths. *See* Sweat lodges
Stelae, 49, 93
Stockade, Cahokia, 25
Stone archway, Taquile Island, 32*p*
Stone Boy, 68
Stone calendars
Aztec, 9*p*, 10*t*, 11*m*, 13, 17
Maya, 46*t*, 93
Stone heads
Olmec (sculpture), 73, 74, 74*p*
for use with clubs (weapon), 103
Stonehenge, 26
Stratified societies, xv
Adena, 1
Cahokia, 26–27
Central and South America, 88
defined, 112
funerary objects and, 33
Mound Building cultures, 86, 88
Olmec, 74
Striking tools, 103–104
Sugiyama, Saburo, 10*t*, 13–14
Sun Dagger, 31
Sun deities. *See* Deities
Sun stone, Aztec. *See* Stone calendars
Suspension bridges, Incan, 42, 93
Sweatlodges, 34, 81
Swidden, 4
Switch reference, 45

T

Taboos, 33
Taino, 90–91
Tambos, 42
Taquile Island, stone archway, 32*p*
Tawantinsuyu (Incan empire), 40
Taxes, Incan, 41–42
Technology and inventions, 92–95
Teeth, 74, 94
Temple mounds, 65, 81*t*
Temple of Inscriptions, 59
Temple of Quetzalcoatl, 19, 96
Temple of the Feathered Serpent. *See* Temple of Quetzalcoatl
Temple of the Sun, 53
Temple of the Three Windows, 53
Temple of the Warriors, 59*p*, 101
Temples, 42, 53, 81
Temporal focus, 83–84, 93
Tenochtitlán, xvi, 17, 19, 20
depicted on map, 21*m*
siege of, 22, 82
writing system, 49
Teosinte, 3, 54
Teotihuacán, 11*m*, 13–14, 95–96, 101
Tezcatlipoca (smoking mirror), 81
Thousand Columns (Mayan), 59*p*
Three sisters, 4, 54
Three Windows, Temple of the (Inca), 53
Throwing board, 97
Throwing devices, 105
Thrusting spear, 39
Thule tradition, 72, 97
See also Norton tradition
Thunderbirds, 16
Tikal (Mayan city), 57, 60, 60*t*
Time, 93
Tipai Ipai, 85
Tipis, 16
Tiwanaku, 98
Tlaloc (god of rain), 82
Tlatchli, 81*t*
Tlatoani, 31, 88
Tlingit, slavery, 85
Tobacco, 94, 98–100
See also Pipes
Toboggans, 94
Toltec, 101–102
cultural area, 30*m*
influence on Maya, 59*p*, 60, 101
religion, 81, 81*t*
Toltee, xv
Tomahawks, 104
Tonatiuh (sun god), 13, 17
Tools
cutting, 104–105
microlithic, 71, 111
Paleo-Indians, 76
piercing, 105
stone, 10*t*, 76
striking, 103–104
Topiltzin. *See* Quetzalcoatl
Totem poles, 16, 106, 106*p*
Totems, 33, 105–106
Tourism, effect on archeological sites, 53–54
Traditions. *See* Culture and traditions
Trepanation, 93–94
Tribute, 22, 90, 112
Trickster stories, 68–69
Tuxtla Script, 73
Twins, 33, 66, 68
Tzompantli, 19, 19*p*, 101

U

Ullamalitzli, 95
Umiaks, 72, 97
Universe, destruction of in myths, 66, 83

V

Veracruz, Mexico, 73
Vikings, 50–51, 107–109
Vilcabamba, 42*t*
Vinland, 50, 51, 107–109, 108*m*
Virginia, Cactus Hill, 11, 11*m*, 77*m*
Vision quests, 33, 105

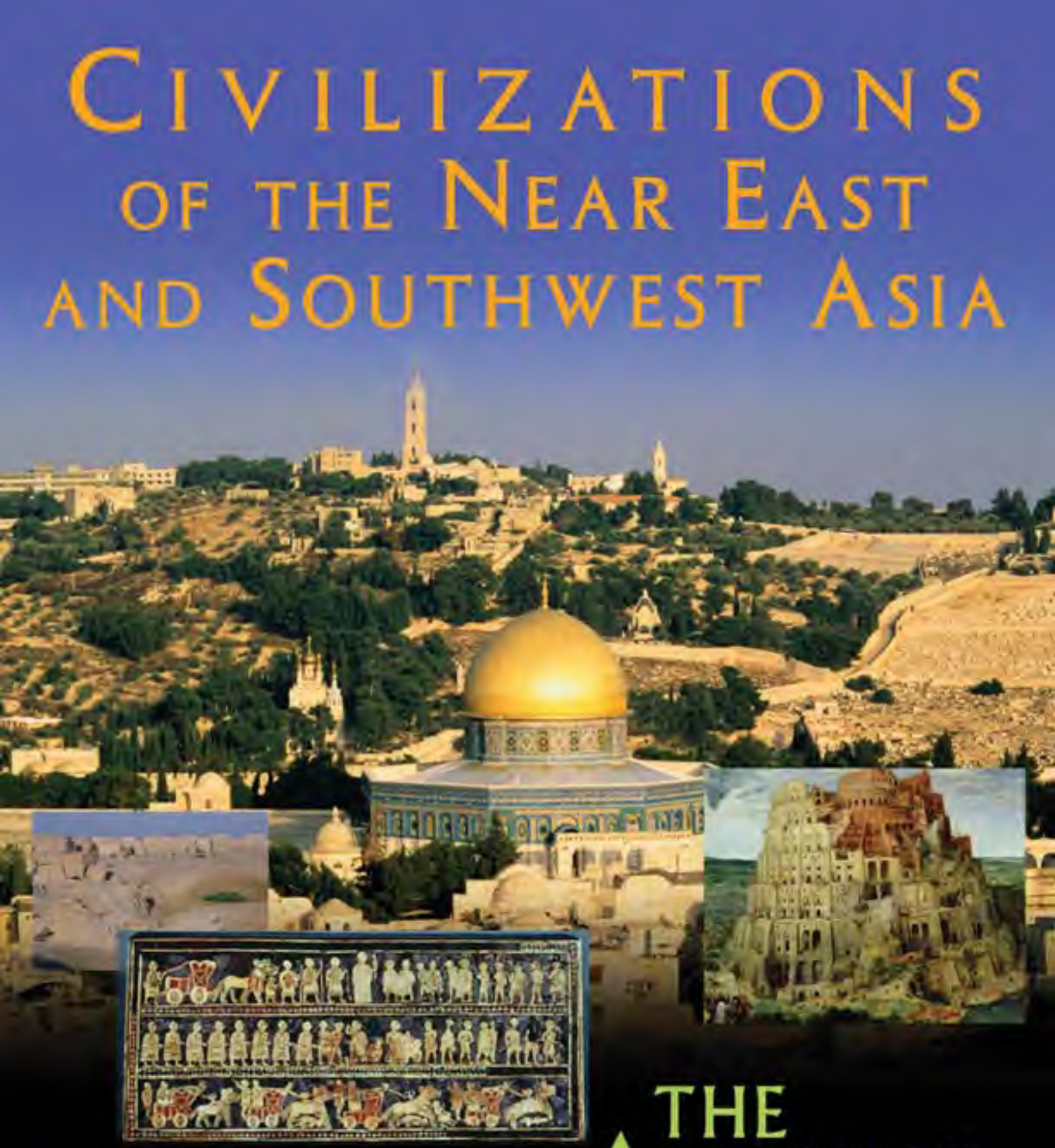
W

Wall of skulls, 19*p*, 101
Water
carrying systems, 92
in myths and legends, 66, 68–69
See also Canals
Weapons
Arctic Small Tools tradition, 71–72
atlatls, 7, 39, 92*p*, 93, 105
bow and arrow, 7, 39, 63, 72
categories of, 103
clubs, 103–104
cutting, 104–105
defensive, 105
hunter-gatherer, 39
piercing, 105
striking, 103–104
tomahawks, 104
Were-jaguar, 75
West Indian, language groups, 48
West Virginia, Moundsville, 1, 65
White Buffalo Calf Woman, 24, 100
White River Sioux, hero stories, 68
Wigwams, 15
Woman, Moche. *See* Burial sites, Moche woman
Women
farming, 3, 4
role of, 32–33, 38–39
Women's rights, 32
Wooden clubs, 103
Woodhenges, 26
Woodland groups, xiv, 14–15, 30*m*
Wool, spinning, 51
Woolly mammoths. *See* Mammoths
World, end of, 69, 81*t*, 83
Woven cloth, Incan, 18
Writing systems
earliest known, 73
Mayan, 58–60, 93
Mesoamerica, 45, 48–50
North America, 49*p*, 50
timeline, 46*t*
See also Language

Y

Yuma, creation myths, 66
Yup'ik, 16, 45, 47

Civilizations of the Near East and Southwest Asia



The Ancient World

THE ANCIENT WORLD

CIVILIZATIONS OF THE NEAR EAST AND SOUTHWEST ASIA

Volume 4

The Ancient World

Civilizations of the Near East and Southwest Asia

Volume 4

GENERAL EDITOR
Eric Cline, Ph.D.
The George Washington University

CONSULTING EDITOR
Sarolta Takács, Ph.D.
Rutgers University

SHARPE REFERENCE
an imprint of M. E. Sharpe, Inc.

DEVELOPED, DESIGNED, AND PRODUCED BY DWJ BOOKS LLC
Principal Authors: Melissa Bishop, Ilicia Sprey

SHARPE REFERENCE

Sharpe Reference is an imprint of M.E. Sharpe, Inc.

M.E. Sharpe, Inc.
80 Business Park Drive
Armonk, NY 10504

© 2007 by M.E. Sharpe, Inc.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the copyright holders.

Library of Congress Cataloging-in-Publication Data
The ancient world / Sarolta Takács, general editor; Eric Cline, consulting editor.
p.cm.
Includes bibliographical references and index.
ISBN 978-0-7656-8082-2 (set : alk. paper)
1. Civilization, Ancient--Encyclopedias. 2. History, Ancient--Encyclopedias.
I. Takács, Sarolta A. II. Cline, Eric H.
CB311.A535 2007
930.103--dc22 2006101384

Printed and bound in Malaysia
The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials,
ANSI Z 39.48.1984

TI (c) 10 9 8 7 6 5 4 3 2 1

All images provided by Getty Images and the following:
background image: Rohan/Stone
inset images (left to right): J.P. De Manne/Robert Harding World Imagery; Bridgeman Art Library; Pieter the Elder Brueghel/Bridgeman Art Library

Contents

List of Illustrations vii

Topic Finder ix

Preface xi

Birthplace of Modern Civilization xiii

Map of the Ancient Near East and Southwest Asia xvii

Agriculture 1
TURNING POINT: *Founder Crops* 2

Anatolia 5

Arameans 6

Archeological Discoveries 6
TURNING POINT: *The Dead Sea Scrolls: The Earliest Scriptures* 10

Art and Architecture 12

Assyria 16

Babylonia 18
TURNING POINT: *The Hanging Gardens of Babylon* 18

Bible 21

Byzantine Empire 22

Çatal Huyuk 26

Chaldeans 27

Christianity 28
GREAT LIVES: *Jesus of Nazareth* 29

Culture and Traditions 31
LINK TO PLACE: *Sacred Recipes in Ancient Mesopotamia* 32
LINK IN TIME: *Divination and Prophets* 35

Darius I, the Great (549–486 B.C.E.) 37

Ebla 38

Fertile Crescent 39

Hammurabi (d. 1750) 41

Harappa and Mohenjo-Daro 42
TURNING POINT: *First Planned Cities* 43

Hittites 45

Indus River 47

Islam 48
GREAT LIVES: *Muhammad* 49

Jerusalem 51

Jews and Judaism 52
GREAT LIVES: *Abraham* 52
TURNING POINT: *The Difficulties of Monotheism* 55

Language and Writing 57
LINK IN TIME: *Parallel Creation Stories* 59

Lydians 62
TURNING POINT: *The First Coins* 63

Mesopotamia 65
LINK IN TIME: *Medicine in Ancient Mesopotamia* 66

Monsoons 67

Myths and Epics 68
LINK TO PLACE: *The Watery Void* 71

Parthian Empire 74

Persia 75
ANCIENT WEAPONS: *Persian Swords and Daggers* 76

Phoenicians 79
TURNING POINT: *The Phoenician Alphabet* 79

Religion 83
TURNING POINT: *The Unifying Power of Islam* 87

Scythians 90
LINK TO PLACE: *Scythian Cultures in Central Asia* 91

Slavery 91

Society 92
LINK TO PLACE: *Carpets in Traditional Societies* 95

Sumer 96

TURNING POINT: *Cuneiform* 97

Technology and Inventions 99

LINK TO PLACE: *Development of Scientific Thinking* 100

Tools and Weapons 103

LINK TO PLACE: *Standard of Ur* 105

ANCIENT WEAPONS: *The Scythed Chariot* 106

Ur 107

Zoroastrianism 108

Glossary 111

Selected Bibliography 115

Index 121

List of Illustrations

Time Lines

Ancient World Time Line Endpapers

Archeological Discoveries 11

Assyria 17

The Rise and Fall of Babylonia 19

Christianity 30

Rise of Islam 50

Language and Writing 61

The Persian Empire 78

Religious Expression in the Near East and Southwest Asia 86

Technology and Inventions 102

Maps

Map of the Ancient Near East and Southwest Asia Before C.E. 1500 xvii

Major Archeological Sites of the Ancient Near East and Southwest Asia 8

The Babylonian Empire, ca. 625–539 B.C.E. 20

The Byzantine Empire, ca. C.E. 800–1000 23

Major Cultural Regions of the Ancient Near East and Southwest Asia, ca. 30,000–300 B.C.E. 33

Israel in the Time of King David, ca. 1010–970 B.C.E. 53

Major Linguistic Groups 60

The Persian Empire, ca. 550–330 B.C.E. 73

Phoenician Trade Routes, ca. 1200 B.C.E. 80

The Development of Writing, ca. 1500 B.C.E. 101

Photos

Warka vase 3

Dead Sea Scrolls 9

Tower of Babel painting 13

Reconstructed Ishtar Gate, Babyon 15

Depiction of the Hanging Gardens of Babylon 19

Ancient city of Babylon archeological site 28

Tomb of Darius 38

Code of Hammurabi 41

Mohenjo-Daro, Pakistan 44

Western Wall, Jerusalem, Israel 54

Cuneiform clay writing tablet 58

First Lydian coins 63

Carving of Amorite demon Humbaba 70

Palace of Cyrus the Great 77

Phoenician inscription from Eshmun Temple 81

Dome of the Rock, Israel 85

Seal and imprint 94

Chariot 104

Royal Standard of Ur 105

Topic Finder

Civilizations and Peoples

Anatolia
Arameans
Assyria
Babylonia
Byzantine Empire
Chaldeans
Elba
Fertile Crescent
Harappa and Mohenjo-Daro
Hittites
Indus River
Islam
Jerusalem
Jews and Judaism
Lydians
Mesopotamia
Parthian Empire
Persia
Phoenicians
Scythians
Sumer
Ur
Zoroastrianism

Culture and Language

Anatolia
Arameans
Assyria
Archeological Discoveries
Art and Architecture
Babylonia
Byzantine Empire
Chaldeans
Christianity
Culture and Traditions
Elba
Fertile Crescent
Harappa and Mohenjo-Daro
Hittites
Indus River
Islam
Jerusalem
Jews and Judaism
Language and Writing
Lydians
Mesopotamia
Myths and Epics
Parthian Empire
Persia
Phoenicians
Scythians
Slavery
Society
Sumer
Ur
Zoroastrianism

General Topics

Agriculture
Archeological Discoveries
Art and Architecture
Culture and Traditions
Language and Writing
Monsoons
Myths and Epics
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

Notable Figures

Abraham (*see* Jews and Judaism)
Darius I, the Great (549–486 B.C.E.)
Hammurabi (d. 1750)
Jesus of Nazareth (*see* Christianity)
Muhammed (*see* Islam)

Places

Anatolia
Assyria
Babylonia
Byzantine Empire
Çatal Huyuk
Elba
Fertile Crescent
Indus River
Jerusalem
Mesopotamia

Parthian Empire
Persia
Sumer
Ur

Periods and Events
Archeological Discoveries
Harappa and Mohenjo-Daro
Fertile Crescent
Monsoons

Religion
Bible
Christianity
Islam
Jews and Judaism
Religion
Zoroastrianism

Society and Way of Life
Agriculture
Christianity
Culture and Traditions
Harappa and Mohenjo-Daro
Jews and Judaism
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

War and Military Affairs
Assyria
Chaldeans
Darius I, The Great (549–486 B.C.E.)
Hittites
Jerusalem
Parthian Empire
Persia
Phoenicians
Scythians
Sumer
Tools and Weapons
Ur

Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality, have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

Birthplace of Modern Civilization

Welcome to *The Ancient World: Civilizations of the Near East and Southwest Asia*. The area of Southwest Asia played host to some of the world's oldest and greatest civilizations, ranging from the Harappans of the Indus Valley, in what is now modern-day India and Pakistan, to the Sumerians, Babylonians, and Akkadians of Mesopotamia, in what is now modern-day Iraq and northern Syria. These civilizations were responsible for some of humanity's earliest and longest-lasting inventions, including the wheel, irrigation, agriculture, writing, and mathematics.

PREHISTORY

Life in Southwest Asia began long before recorded history and recordkeeping, in the era known as prehistory. The transition in the region to a modern way of life really began about 10,000 years ago, during the so-called **Neolithic Revolution**, when hunting and gathering gave way to a sedentary lifestyle with the first domestication of plants and animals. Within a few thousand years, plants such as wheat and barley were being cultivated and sheep, goats, cattle, and even dogs had been domesticated. This first took place in what is known as the Fertile Crescent, a crescent-shaped area of land between the Mediterranean Sea and the Persian Gulf. By the seventh and sixth millennia B.C.E., full-fledged villages were established at places as far north as Çatal Huyuk in Anatolia (modern-day Turkey), and as far south as Jericho in the Levant (modern-day Israel, Jordan, and Lebanon).

By 3000 B.C.E., Southwest Asia was on the verge of the transition from prehistory to history, as writing was invented at approximately this time, and only with the invention of writing is the recording of history possible. The invention of writing took place just as this area began also seeing the birth of the world's first true empires—those of the Sumerians in Mesopotamia and the Harappans in the Indus Valley.

Using a **cuneiform** system of wedge-shaped symbols, the Sumerians of ancient Mesopotamia were able to begin the process of keeping accounting records for possessions such as flocks of sheep and goats. They quickly realized the utility of this system for recording all sorts of other things—myths, poems, histories, and eventually even laws and other aspects of their bureaucracy. The Harappans of the Indus Valley also began to use writing during the third millennium B.C.E. It may well have been brought to them by the Sumerians, because the two areas were in contact and were trading partners by that time.

THE LAND AND ITS PEOPLE

The Near East and Southwest Asia cover a very large area—from Turkey in the northwest to Iran and Afghanistan in the northwest, and from Israel and Arabia in the southwest to India in the southeast. Within this area there are a number of large rivers that, much like the Nile River in Egypt, helped to determine the very course of civilization in the region. Among these important rivers are the Indus, in what is now modern-day India and Pakistan, and the Tigris and Euphrates in what are now modern-day Iraq and northern Syria. Indeed, the ancient Greeks used the Tigris and Euphrates rivers to give the region of ancient Iraq its name. They called it Mesopotamia, which translates as "the land between the rivers."

Mesopotamia is where humans first domesticated plants and animals during the seventh millennium B.C.E. It was in this region, as well as in Egypt, that the world's first towns and villages began to appear. By 3000 B.C.E., these early settlements developed into the world's first cities, states, and empires.

A number of other geographic features also helped to determine the course of civilization in this region. Principal among these are several large bodies of water, including the Persian Gulf, the Mediterranean Sea, and the Black Sea. These waterways allowed the inhabitants of the region to trade with each other as well as with outside cultures. There are also any number of mountain ranges that either presented barriers to, or provided passageways for, ancient peoples. Among the more important of these are the Taurus and Zagros mountains of southern Turkey and northern Syria, which were the source of many natural resources, including timber and metal ores.

EARLY PEOPLES AND CIVILIZATIONS

By the third millennium B.C.E., the great Harappan civilization in the Indus Valley had arisen, with its large and important cities of Harappa and Mohenjo-Daro. At the same time, or perhaps even a bit earlier, in the region of the Tigris and Euphrates rivers in Mesopotamia, we find the Sumerians rising to prominence. They were followed by the Akkadians and then the Babylonians in the later third and early second millennia B.C.E., respectively. During the middle and later years of the second millennium B.C.E. (ca. 1700–1200 B.C.E.), the Hittites of Anatolia and the Canaanites of the Levant developed into prominent cultures that frequently came into contact with the Egyptian empire.

The late second and early first millennia B.C.E. witnessed the rise of fascinating cultures and inventions in Southwest Asia. These included civilizations of the Israelites, who introduced **monotheism** (the belief in a single god); the Phoenicians, who developed the alphabet; the Lydians, who manufactured the world's first coins; the Assyrians; the Persians; and the Scythians. Beginning in the first millennium C.E., the Byzantine Empire flowered in what are now modern Turkey and Greece, and Islam spread across much of what is now the modern Middle East and as far west as modern-day Spain. Other major religions that were born in the region between the second millennium B.C.E. and the first millennium C.E. include Judaism, Zoroastrianism, and Christianity.

EXCHANGE AND ENCOUNTER

The various regions of Southwest Asia were in almost constant contact and communication with each other. Already during the third millennium B.C.E., the civilizations of Mesopotamia and the Indus Valley were in direct contact, trading objects and ideas back and forth over the centuries. Mesopotamia was also in contact with pre-dynastic Egypt, perhaps as early as the fourth millennium B.C.E. It is currently a matter of debate as to which civilization invented writing first—the Sumerians, who used cuneiform in about 3700 B.C.E., or the Egyptians, who in about 3400 B.C.E. wrote using **hieroglyphics**.

One of the most interesting examples of exchange and encounter involved the Assyrians from early-second-millennium B.C.E. Mesopotamia. Assyrian merchants traveled all the way to Anatolia each year with huge caravans of donkeys, trading tin and **textiles** for silver and other goods. They would spend part of the year in Mesopotamia, part of the year in Anatolia, and the rest of the time traveling between the two regions, as indicated by texts found by **archeologists** at a site called Kültelpe Kanesh in modern Turkey.

Conquest

Encounters between these various cultures and civilizations often were marked by conflict. Some of the most famous wars were between the Hittites of Anatolia and the Egyptians during the second millennium B.C.E. over territory in Canaan and northern Syria. Wars of conquest were waged by the Sumerians, Akkadians, Babylonians, and Chaldeans during the third and second millennia B.C.E., with each group's succeeding its defeated rivals. The Akkadians displaced the Sumerians, the Babylonians displaced the Akkadians, the Chaldeans displaced the Babylonians, and so on, in a constant cycle of conquest.

In many instances, the new conquerors adopted or adapted the culture of the people that they had just vanquished. Thus, inventions such as mythology and literature passed down from the Sumerians to the Akkadians, Babylonians, and ensuing civilizations. Each culture added to the mix as well, passing down a wealth of information to the Canaanites and Israelites. This knowledge was later picked up by the Greeks and Romans, who bequeathed it as part of their legacy to the modern world.

Trade

Long-distance trade was conducted both overland and by sea. At several points in history, particularly during the second millennium B.C.E., entire classes of merchants specialized in international trade. At the same time, diplomats serving as messengers and intermediaries between royal courts traveled from Anatolia to Egypt or from Egypt to Mesopotamia. Frequently, the merchants and diplomats were

one and the same, for merchants could just as easily carry messages and diplomats could just as easily bring textiles and other goods with them, and both could convey gifts from one monarch to another.

Perhaps the most successful and noteworthy merchants were the seafaring Phoenicians of the late second and early first millennia B.C.E. These daring sailors made their way as far west as Spain and Gibraltar, establishing cities and colonies in places as far away as Carthage in North Africa.

TRANSITION

The Islamic Arab empire that arose in the seventh century C.E. was the last great civilization of ancient Southwest Asia. In little more than a century, Islam grew from a tiny religious sect in central Arabia to a powerful military and social force that spread across the ancient world. By C.E. 750, the caliphate, or **secular** Muslim realm, stretched from western India to the Mediterranean, across Arabia and North Africa and into Iberia (modern-day Spain and Portugal). The Islamic empire was vast, rich, militarily powerful, and highly educated. Europe, by comparison, was poor, backward, and underdeveloped.

The Turks and Mongols, nomadic raiders from Central Asia, brought an end to Arab control over Southwest Asia, beginning in the eleventh century C.E. In the late 1070s, the Seljuk Turks invaded Anatolia, establishing a Turkish state there. In 1218, the Mongolian leader Genghis Khan (ca. C.E. 1162–1227) overran Persia (modern-day Iran), eventually wresting all of Southwest Asia from Arab rule. Both the Turks and the Mongols, however, adopted the Islamic faith of their defeated foes. The Ottoman Turks overthrew the Seljuks in C.E. 1299 and expanded the Turkish realm to include most of the lands conquered by Genghis Khan. Ottoman armies twice advanced into Europe as far as Vienna, Austria, before being repulsed by Christian forces.

The Ottomans ruled over Southwest Asia until the early twentieth century C.E., although their power and the extent of their territorial control rose and fell at various times. By the nineteenth century, the Ottoman state had grown so weakened and corrupt that it was known as "the sick man of Europe." By this time, most people had long forgotten about the powerful civilizations that once existed in Southwest Asia. The Ottomans themselves showed little interest in the ancient history of the region. In Europe, Babylonia and Phoenicia were known mainly because they were featured in Bible stories. Significant early cultures, such as those of Sumerians, Akkadians, and Hittites, were for the most part little-known academic footnotes.

LINKS TO THE PRESENT

In the nineteenth century C.E., European interest in the ancient civilizations of Southwest Asia was stirred by discoveries made at sites like Ur, Uruk, and Nippur in Iraq, and, in the Indus Valley, Harappa and Mohenjo-Daro. Sculptures, jewelry, carvings, grave goods, and inscribed clay tablets revealed the existence of advanced ancient cultures and scholars vied to unlock their millennia-old secrets. European explorers rushed to discover, and bring home to their museums, the best preserved and most famous antiquities that they could. The long-lost remains of the Sumerians, Assyrians, Babylonians, and Harappans began to emerge from the sand and dirt of Southwest Asia.

When the amateur British **linguist** Henry Rawlinson deciphered and translated the so-called Behistun **inscription** in 1838, cuneiform became more than mere decorative wedges impressed on clay or carved on stone. The ability to read the writings of the Persians, Elamites, and earlier peoples of Mesopotamia brought the history of the Near East and Southwest Asia to a fascinated European audience. This fascination has lasted to the present day and has now spread to an international audience.

The colonizing movements of the nineteenth century C.E. and the wars and politics of the twentieth century brought significant changes to the region, including the creation of modern nations such as Iraq, India, Pakistan, Israel, Lebanon, Syria, and Jordan. Some of these political divisions were quite artificial, imposing man-made boundaries on areas where such boundaries had previously been

created only by geography—rivers, mountains, and valleys—and boosting certain local tribes and families to prominence, often at the expense of others. Nevertheless, the antiquity of the region and the long stretch of continuous civilizations which have inhabited Southwest Asia remain as reminders of the longevity of human habitation in this area. As the birthplace of agriculture, urban living, writing, the wheel, and other vital underpinnings of the modern world, it may truly be said that this region gave rise to civilization itself.

FURTHER READING

Aruz, Joan, ed. *Art of the First Cities: The Third Millennium B.C. from the Mediterranean to the Indus*. New York: The Metropolitan Museum of Art, 2003.

Kenoyer, Jonathan Mark. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.

Kramer, Samuel Noah. *History Begins at Sumer: Thirty-nine "Firsts" in Man's Recorded History*. 3rd ed. Philadelphia: University of Pennsylvania Press, 1981.

Sandars, Nancy K. *The Epic of Gilgamesh*. Harmondsworth, England: Penguin Books, 1972.

Eric Cline, Ph.D.
General Editor

Map of the Ancient Near East and Southwest Asia

ANCIENT NEAR EAST AND SOUTHWEST ASIA BEFORE C.E. 1500

Historians and archeologists often refer to ancient Southwest Asia as the "cradle of civilization" because it was the site of many of the world's earliest settled societies, including the Sumerians, Akkadians, and Babylonians. Each subsequent culture borrowed freely from its predecessors, creating elements of a common Mesopotamian civilization, many of which still survive. The region was also the birthplace of the world's major monotheistic religions—Judaism, Christianity, and Islam.

A

Agriculture

Archeological evidence suggests that humans first domesticated plants and animals and began to practice settled agriculture in Southwest Asia. Until about the seventh millennium B.C.E., the people who inhabited the region were hunter-gatherers who survived by following and hunting roving herds of animals and supplemented their diet with grain and plants they found growing wild.

The region was settled around 9000 B.C.E. and, over the next 2,000 years, people began to experiment with gathering seeds, drying them, and planting them. By the seventh millennium B.C.E., these efforts resulted in the domestication of a variety of plants and the beginnings of settled agriculture.

At about the same time humans were learning to domesticate crops, they also began to domesticate certain animals. Sheep and goats were the first to be domesticated, because of their ability to move easily over the rocky terrain of the region and to eat the wild tough grasses that grow there. By the fifth millennium B.C.E., pigs and an early ancestor of today's cows also were being raised. Eventually, larger animals such as oxen were domesticated and used for heavier agricultural labor including pulling plows. The domestication of animals thus not only accompanied the development of agriculture, but also helped to facilitate it.

ENVIRONMENT

Early farmers in Southwest Asia had to overcome a series of environmental challenges to establish successful agricultural communities. In the Fertile Crescent, where the first agricultural settlements arose, rainfall is restricted largely to the months of December to April. This limits the growing season, which means that generally only one crop can be produced each year. Most of the water available for farming is supplied by the Tigris and Euphrates rivers, which flow from the Taurus Mountains of Anatolia (present-day Turkey) to the Persian Gulf. Melting spring snows in the mountains feed the rivers, but the supply of water they provide is irregular. Over any seven-year period, the region averages at least one year of drought and one year of significant flooding.

Other environmental issues that farmers face in the region include thin and rocky soil, and extremes of temperature. The area between the Tigris and Euphrates contains few trees, the roots of which would serve to anchor the soil and prevent the erosion and loss of topsoil caused by blowing winds. Those same winds rob moisture from the already rocky soil. These difficulties are compounded by

TURNING POINT

Founder Crops

Sedentary farming developed in the Fertile Crescent largely because of the presence of two hardy forms of wheat native to the region: einkorn and emmer. Hunting and gathering societies found that the wild forms of these basic crops, called founder crops, could be used in a variety of ways. The kernels were ground into flour, which was used to make gruel and bread. The grains were also fermented into an early form of beer, which would have been healthier to drink than water, which contained both bacteria and other contaminants.

Einkhorn and emmer were among the first plants to be domesticated, and they were the focus of early agricultural efforts. Although these plants constituted a bland diet, they contained sufficient calories and nutrition to support the group and improve the population's general health. Over time, farmers learned to domesticate other basic crops, called founder crops, including barley, beans, lentils, and peas. This more diversified diet provided a wider variety of nutrients and minerals, which enhanced the population's potential ability to fight off malnutrition, related diseases, and death from these factors.

temperatures that range from below freezing to 112° Fahrenheit (45° Celsius).

IRRIGATION

In order to make intensive agricultural production possible, humans in the region needed to solve the problem of reliable water resources. That solution took the form of irrigation, which developed in Mesopotamia by about 5400 B.C.E., and in the Indus River valley by 2600 B.C.E. This marked one of the most significant early stages in the **history of science and technology**.

Early irrigation systems were rudimentary, consisting of hand-dug channels leading from a river to nearby fields. The earthen irrigation ditches were covered with baked clay pipes to prevent loss of precious water into the surrounding soil. Where pipes met, they were connected with bitumen, a thick form of crude oil used as a kind of tar to seal connections and prevent leaks.

To control the flow of water, rocks were used as gates to open or close channels, moving water into the fields when needed and blocking it when the crops were sufficiently watered. Over time, farmers fashioned metal gates to replace the rocks, eventually developing mechanically operated systems to open and close the channels as needed.

These irrigation systems continued to evolve, becoming more sophisticated and making increasingly greater use of technical innovations. In the seventh century B.C.E., the Persians created the *qanat* to move water with little loss or evaporation. The qanat consists of several vertical shafts cut into the soil and connected by a horizontal tunnel cut at a slight downward angle away from the water source. This allows gravity to do the work of moving the water. A 2,700-year-old qanat is still in use today in the Iranian city of Gonabad. It is almost 1,200 feet (360 m) deep and 27 miles (43 km) long.

Another invention that significantly eased the problem of irrigation was the *shaduf*. This device consists of a frame made of two upright posts on which a horizontal wooden pole is suspended. The long end of the horizontal pole holds a bucket that hangs over the river; the other end holds a counterweight. After the bucket is lowered into the river, the counterweight lifts the water-filled bucket. The pole is then swung around and the water from the bucket water is emptied into a canal, from which it flows into the field.

SOCIAL CONSEQUENCES

The development of settled agriculture led not only to changes in diet and the adoption of a sedentary lifestyle, but also to significant changes in human social organization. **Archeologists** and anthropologists have discovered a clear **cause-and-effect relationship** between the rise of agriculture and

This three-foot-tall alabaster vase from the ancient Mesopotamian city-state of Uruk contains some of the world's first narrative pictures. The five tiers of carvings depict water, grain, sheep, priests, and rulers bearing offerings—the basic components of the ancient agricultural societies of the Near East and Southwest Asia. (Erich Lessing/Art Resource, NY)

the evolution of more complex social and cultural institutions.

Gender Roles

One way in which agriculture affected human **social history** and **cultural history** was by changing the roles assumed by men and women in farming communities. Prior to adopting a sedentary lifestyle, women were responsible for gathering the wild grains, grasses, and other plants that formed a large part of the hunter-gatherer diet. As a result, they also took the lead in the early domestication of plants. Men, by contrast, were primarily occupied with hunting.

With the advent of settled agriculture and the domestication of animals, hunting lost its importance for group survival. Male group members thus turned the energies they had once invested in the hunt to the task of farming, taking control of agricultural production. Because of the central role that agriculture played in the growth and survival of settled farming communities, male control over farming translated into control over daily decision making. The largely **egalitarian** social organization of hunting-gathering groups gave way to societies in which men assumed a much more dominant role.

Social Stratification

Over time, farmers became increasingly more efficient, producing greater amounts of food with less labor. Agricultural communities found that fewer people were needed to grow the crops required to feed the population, which freed some members of society to take on different tasks. Some learned to make pottery to store the food, while others perfected skills such as weaving and metalworking. The goods produced by these early **artisans** were used not only locally but also were eventually traded with other communities. A merchant class arose that did not produce goods themselves, but facilitated the spread of goods from one community to another. Agriculture thus also led to a revolution in human **economic history**.

While the small size (30 or fewer individuals) of hunting-gathering communities precluded the need for formal government, the larger size and increasing social complexity of settled communities demanded some form of central social organization. In response to this need, agricultural communities developed a more **hierarchical** social structure that featured a ruling class to coordinate and direct the efforts of the society. In fact, agriculture can be credited with creating the conditions that led to the rise of the world's first true civilizations. The evolution of human **political history** began with the move from the decentralized leadership typical of hunter-gatherer societies to the **stratification** that characterizes sedentary societies.

Religious Belief and Practice

The emergence of the earliest civilizations in Mesopotamia (the region bounded by the Tigris and Euphrates rivers) went hand-in-hand with the rise of the first organized religions. These belief systems centered on the worship of deities identified with the forces of nature—sun, rain, and wind—that dictated the success or failure of agricultural efforts and with heavenly bodies such as the moon. The residents of early Mesopotamian **city-states** believed that they and the lands they controlled were overseen by these deities. Each had a patron god and a **pantheon** of local minor deities.

In each city-state, a priestly class emerged that was responsible for properly honoring the gods, which they believed ensured the prosperity of the community. The priesthood managed agricultural lands, collected taxes in the form of crops and animals, and assigned human and financial resources for building projects. Farmers did not own the land they worked, but rented it from the priesthood.

Religious rituals practiced by the priests were considered vital to ward off bad weather, pests, and other natural occurrences controlled by the gods. Good harvests were secured by offerings of grain and wine to the earth goddess and to the gods of sun, wind, and rain. At both planting and harvest times, symbolic fertility rituals would take place that often included ritual intercourse between farmers and temple prostitutes, representing the interaction of the farmer and the earth goddess. In a region with such a variable environment, marked by extremes of temperature and rainfall, the good will of supernatural forces was considered essential for survival.

CONTRIBUTIONS

The most basic change wrought by the development of sedentary agriculture was an increase in food production. This led in turn to an increase in population and a general improvement in people's health, which increased their ability to fight off disease, resulting in the possibility of living longer and healthier lives.

Agriculture also spurred technological innovation as new tools were developed to make farming more productive. In the sixth millennium B.C.E., the plow was invented. At first, this tool consisted of nothing more than a forked stick used to break up the soil. By the fourth millennium B.C.E., the need for stronger implements led to the discovery of smelting—the extraction of metal from ore. Copper and later bronze was fashioned into blades for hoes and sickles and used to create an improved plow. These tools allowed farmers in Mesopotamia to work the different kinds of soils that existed in the region, enabling them to produce more food in each growing season. They were also the precursors of the first metal weapons.

Settled agriculture also promoted the development of diverse cultures in Southwest Asia. Groups of people who lived together shared unique sets of values and patterns of behavior that characterized them and separated them from other groups. Each culture had its own religious beliefs, artistic decorations, styles of pottery, and forms of social organization. As civilization emerged in Mesopotamia, rulers created sophisticated law codes, architects undertook massive building projects, and artisans, writers, and poets produced the world's first artistic and literary works. In all of these ways, agriculture formed the indispensable foundation for the rise of human civilization.

See also: Anatolia; Babylonia; Fertile Crescent; Hammurabi; Harappa and Mohenjo-Daro; Indus River; Mesopotamia; Persia; Sumer.

FURTHER READING

Bellwood, Peter. *First Farmers: The Origins of Agricultural Societies*. Malden, MA: Blackwell, 2004.

Price, T. Douglas, and Anne B. Gebauer, eds. *Last Hunters, First Farmers: New Perspectives on the Prehistoric Transition to Agriculture*. Santa Fe, NM: School of American Research Press, 1995.

Smith, Bruce D. *The Emergence of Agriculture*. New York: Scientific American Library, 1995.

Wilkinson, T.J. *Archaeological Landscapes of the Near East*. Tucson: University of Arizona Press, 2003.

Woods, Michael, and Mary B. Woods. *Ancient Agriculture: From Foraging to Farming*. Minneapolis: Runestone Press, 2000.

Zohary, Daniel, and Maria Hopf. *Domestication of Plants in the Old World*. Oxford: Oxford University Press, 2001.

Anatolia

A large peninsula that includes most of present-day Turkey and that was the site of several prominent ancient cultures. Also known as Asia Minor, Anatolia is surrounded by the Mediterranean Sea to the south, the Aegean Sea to the west, and the Black Sea to the north. It is separated from the European continent to the northwest by two narrow straits, the Bosporus and the Hellespont. Between the two straits lies the Sea of Marmara; together, these bodies of water provide a water passage between the Aegean and Black seas.

The rocky Anatolian Plateau, which dominates the center of the peninsula, is surrounded by mountains and foothills that affect weather patterns and serve to limit rainfall in the region. Two major mountain ranges stretch across Anatolia: the Pontus Mountains, which border the Black Sea, and the Taurus Mountains, in the south along the Mediterranean coast. The highest peaks rise from about 5,000 to about 13,000 feet (1,500 to 4,000 m). The region has many rivers fed by the melting snows of the Pontus and Taurus mountains. The most important of these are the Halys, the longest in Anatolia, and the Euphrates and Tigris, which flow southward into Mesopotamia and empty into the Persian Gulf.

Evidence of prehistoric settlements in Anatolia goes back to the **Neolithic Period**. Çatal Huyuk, which dates to about 7500 B.C.E., is the largest such settlement found to date. Around 3000 B.C.E., independent **city-states**, such as Troy (located on the Aegean coast) were first established in the region. Early in the second millennium B.C.E., merchants from the Assyrian empire of northern Mesopotamia established trading settlements that brought Anatolians into the wider political and economic life of the Fertile Crescent.

Around 1750 B.C.E., the Hittites, a loose confederation of Indo-European peoples, invaded Anatolia and made it the center of their new kingdom. By 1200 B.C.E., however, political fragmentation weakened the Hittites and left them vulnerable to invasion from other groups in the Aegean region. The two most important groups of these invaders were the Persians, who conquered the area in 546 B.C.E., and the Macedonians under Alexander III, the Great (r. 336–323 B.C.E.), who defeated the Persians and brought the region into the **Hellenistic** world. After Alexander's death, Anatolia splintered into several kingdoms that were incorporated into the Roman Republic by the first century B.C.E.

Anatolia remained under Roman control for the next 1,500 years, first as part of the Roman Empire (27 B.C.E.–C.E. 476) and then as the center of the Byzantine Empire. By the fourteenth century C.E., the Islamic Ottoman Empire expanded into Anatolia and, by 1400, Byzantine control was limited to the city of Constantinople, which fell to Ottoman forces in 1453.

See also: Assyria; Çatal Huyuk; Hittites; Persia.

FURTHER READING

Lloyd, Seton. *Ancient Turkey: A Traveller's History of Anatolia*. Berkeley: University of California, 1989.

Mitchell, Stephen. *Anatolia: Land, Men, and Gods in Asia Minor*. Vol. 1, *Celts in Anatolia and the Impact of Roman Rule*. New York: Oxford University Press, 1993.

Stefoff, Rebecca. *The Ancient Near East*. Tarrytown, NY: Benchmark Books, 2005.

Arameans

Nomadic **Semitic** people who lived in scattered groups throughout Mesopotamia and Syria. Although the Arameans were never a major power in the region, by the sixth century B.C.E., their language had been adopted as the common language of governance and commerce throughout the Persian Empire. The influence of the Aramaic language in the region continued under Roman rule in the first several centuries C.E.

The Arameans, whose origins are not recorded, migrated into the region as nomadic herders between 1500 and 1200 B.C.E. The first evidence of their presence there comes from an **inscription** dated to the reign of the Assyrian king Tiglath-Pileser I (r. ca. 1115–1076 B.C.E.). While the Assyrians were among the strongest powers in the region, they did not exercise total control and the Arameans were able to carve out small territories for themselves.

By the tenth century B.C.E., the Arameans took over several Assyrian strongholds, including the important trading cities of Harran (in modern-day Turkey), and Damascus (in present-day Syria). In Damascus, the Arameans built a system, similar to later Roman aqueducts, by which water was brought via stone channels to the city from sources in the countryside and mountains.

One of the Arameans' most significant contributions to civilization was the development of a phonetic alphabet based on the earlier Phoenician alphabet. By the eighth century B.C.E., the Aramean language and writing system were being used widely in ancient Southwest Asia. The Persians adopted the Aramaic language around 500 B.C.E. as a common tongue to help unify their multilingual empire. Other Semitic-speaking peoples of the region, including the Hebrews, adopted the Aramaic alphabet and language for daily use. The Hebrews used Aramaic to write portions of the Hebrew Bible, or scriptures. Many early Christians also spoke Aramaic.

See also: Archeological Discoveries; Assyria; Christianity; Culture and Traditions; Jews and Judaism; Language and Writing; Persia; Technology and Inventions.

FURTHER READING

Lipinski, Edward. *The Arameans: Their Ancient History, Culture and Religion*. Leuven, Belgium: Peeters, 2000.

Roux, Georges. *Ancient Iraq*. New York: Penguin, 1992.

Archeological Discoveries

Scholars, travelers, and historians have for many centuries been intrigued by the lost civilizations of the Near East and Southwest Asia and have unearthed and studied their **artifacts**, rituals, and remains for clues to the region's earliest inhabitants.

Medieval scholars, including the twelfth-century C.E. rabbi Benjamin of Tuleda and the Arab Ibn Khaldun (C.E. 1332–1406), described the ruins of Mesopotamia in their writings. However, the Ottoman Turks, who ruled the region from the fourteenth through the early twentieth centuries, showed little continuing interest in its ancient history. A real understanding of the society of

ancient Southwest Asia, based on the remains of local cultures, would await the development of professional archeology in the late nineteenth century C.E.

EARLY EXPLORATION

The decline of Ottoman influence in the early nineteenth century opened Southwest Asia to European colonial ambition and political competition. British and French explorers of this **era** conducted the first systematic investigations of the large mounds of ruins found throughout the region. British scholar and traveler Claudius James Rich (1787–1821) explored the sites of ancient cities including Babylon and Persepolis, collecting artifacts and exhibiting them in England, where they created increased interest in ancient Mesopotamian history and culture. In 1842, Paul Emile Botta, the French consul to the Ottoman Empire, conducted the first **excavation** of the ancient Assyrian city of Nineveh. These and other expeditions netted a large collection of sculptures, **reliefs**, and texts for British and French museums.

The early- to mid-nineteenth century was also a time when European **linguists** were making significant strides in understanding ancient Mesopotamian languages. The deciphering of the Behistun **Inscription** provided the key to understanding the **cuneiform** script of ancient Mesopotamia. The inscription, carved into a cliff in what is now Iraq, contained the same text in three different languages: Old Persian, Elamite, and Babylonian. Sir Henry Rawlinson (1810–1895), a British army officer, translated the Old Persian text in 1838, which allowed him and others to decipher the Babylonian cuneiform.

Unfortunately, another product of the widespread interest in Mesopotamian **antiquity** was the practice of grave robbing. Sites of new discoveries often were looted, with the thieves frequently damaging other potentially useful finds in their haste to take valuable specimens. British Egyptologist Wallis Budge (1857–1934), who spent time in the late 1880s investigating stolen cuneiform tablets, found that many goods were stolen by excavators assisting on the digs.

Beginnings of Scientific Archeology

The early explorers who dug in Southwest Asia were mostly enthusiastic amateurs and scholars with little or no training in archeological techniques. By the late 1800s, however, the search for treasure that motivated the first excavations gave way to expeditions based on **historical research** and informed by **historical inquiry** into the lives of the people of ancient Southwest Asia. Professional **archeologists** brought a systematic and scientific approach to the field and applied **historical interpretation and analysis** to explain the significance of their discoveries.

The first truly professional archeological expedition in Southwest Asia was an excavation of Babylon in 1899, which was led by German archeologist Robert Koldewey (1855–1925). His close attention to the strata, or layers, of earth in which remains were found allowed him to date items much more precisely and determine which artifacts were related to one another in time. This was typical of the more rigorous scientific approach to the discipline that applied new approaches, such as **chronological thinking,** to the study of archeological remains.

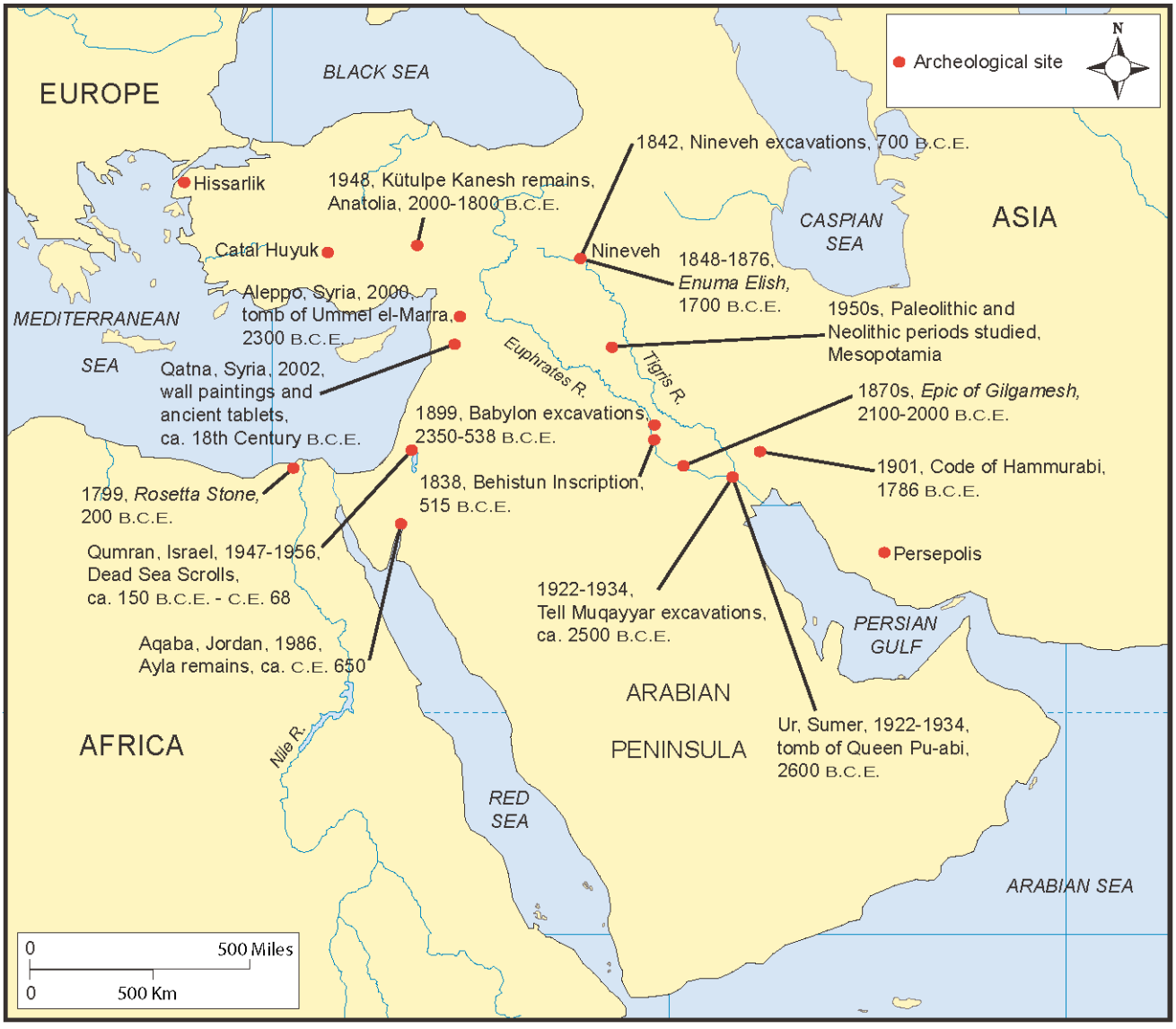
Also characteristic of scientific archeology was a change in the attitude toward excavating sites. Previous amateurs and antiquarians rifled through sites in search of the best-preserved artifacts to acquire and sell or display. Many paid scant attention to preserving or recording the overall condition of the site. The new generation of German archeologists was more interested in seeing how a site developed over time. This usually required careful excavation of multiple layers of habitation at the same site. Archeologists had to take care not to disturb or destroy items found in one layer in their haste to reach older levels. The excavators were also now careful to make an exact record of the location and identity of every item found at a site for future study back home.

DISCOVERIES SINCE WORLD WAR II

Rapid advances in many fields of physical science greatly aided archeologists in their explorations of ancient Southwest Asia. The invention of **radiocarbon**

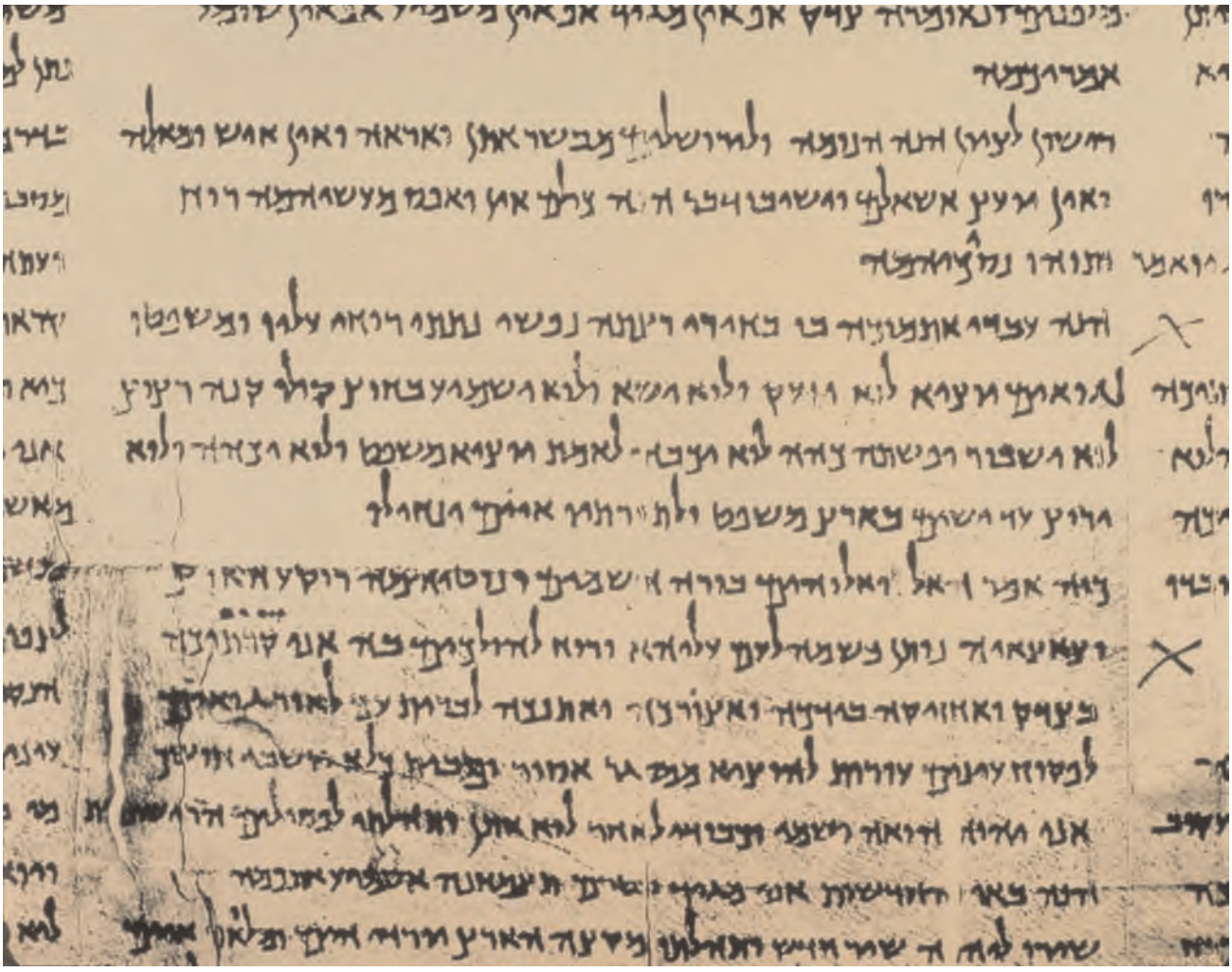
MAJOR ARCHEOLOGICAL SITES OF THE ANCIENT NEAR EAST AND SOUTHWEST ASIA

Throughout Southwest Asia, archeological discoveries during the last 200 years have unraveled a great many mysteries about the past. Findings help to tell the history of the ancient cultures of these lands.



dating in 1949 allowed for more precise study of the **Paleolithic** and **Neolithic periods** in the region. Studies of plant and animal remains in the 1950s led to much better understanding of the origins of agriculture and animal domestication in Mesopotamia.

In 1948, Turkish archeologist Tashin Özgüç (1916–2005) excavated the remains of the city of Kütulpe Kanesh, an important trading center in eastern Anatolia (modern-day Turkey) in the twentieth to eighteenth centuries B.C.E. The site was of particular interest because of the discovery of an Assyrian merchant colony in this Hittite city. Documents found in the colony record trade between the Assyrian colony and the **city-state** of Assur, as well as trade between Assyrian merchants and local people. The texts are the oldest written documents discovered in Anatolia, and the Hittite words and names recorded in them are the oldest existing written examples of any Indo-European language.



This is a close-up of lines from one of two scrolls containing the text of the Book of Isaiah from the Old Testament, discovered at Qumran, northwest of the Dead Sea. During the late 1940s, the caves in and around Qumran yielded a wealth of similar ancient documents that represent the oldest existing copies of Biblical literature. (Erich Lessing/Art Resource, NY)

Although there are recent and numerous exceptions, for example in Syria, by the late twentieth century C.E. many of the major archeological sites in Southwest Asia had been discovered and thoroughly explored and recorded. By the 1970s, archeological efforts in the region increasingly turned to preserving existing sites from urban development. Dam construction in countries including Turkey, Syria, and Iraq threatens a significant number of archeological sites in Mesopotamia.

EVIDENCE FROM THE PAST

The artifacts uncovered by scholars and archeologists can provide insight into details of life in ancient societies that may be missing from or less immediate in written records. The vast majority of cuneiform records, for example, deal with commercial transactions and other mundane matters that offer a limited vision of daily life. A look at two archeological discoveries in Southwest Asia shows how scholars use remains to help reconstruct past civilizations.

Tell Muqayyar: Uncovering the Past

By the early twentieth century, most of the ancient Sumerian, Babylonian, and Persian cities had long ago fallen into decay, been abandoned, and then covered by wind-driven sands. The mounds formed by these ancient cities were called "tell" in Arabic and "tel" in Hebrew. Archeologists working in the

TURNING POINT

The Dead Sea Scrolls: The Earliest Scriptures

The Dead Sea Scrolls are a group of ancient Jewish manuscripts discovered in eleven caves near the site of the ancient city of Qumran, near the Dead Sea on modern-day Israel's eastern border. The scrolls, written mostly in Hebrew or Aramaic, contain the earliest copies of most of the Hebrew scriptures. Composed between about 150 B.C.E. and C.E. 68, they constitute the only existing Hebrew scriptural writings predating C.E. 100, making them particularly interesting to religious and Biblical scholars. Almost 900 texts or fragments of texts have been excavated from the caves.

In 1947, a group of Bedouin shepherds, while searching for a lost goat in the desert, found a cave in which the manuscripts had been preserved in jars. From 1947 to 1956, more manuscripts were uncovered. One scroll was nearly 28 feet (8.5 m) long. Scholars have been studying and deciphering the texts, a difficult task because so many of the scrolls consist of fragments that must be pieced together or interpreted without the rest of the document. Some of the scrolls are so fragile that they disintegrate at the slightest touch.

The scrolls contain many different types of writings, both religious and **secular**: texts from every book of the Hebrew Bible, or Old Testament, except those of Esther and Nehemiah; commentaries on religious texts; and writings about the customs and culture of the people who wrote the scrolls, the Essenes. The scrolls also provide previously unknown information about biblical prophets such as Abraham and Noah, including an excerpt that seeks to explain why God asked Abraham to sacrifice his son Isaac. Many scholars consider the Dead Sea Scrolls to be the most important archeological discovery of the twentieth century.

region quickly learned that tells generally indicated the site of buried structures.

One such site, Tell Muqayyar, was the object of a professional excavation from 1922 to 1934 by members of the British Museum and the University of Pennsylvania. Led by British archeologist Sir Leonard Woolley, this group discovered the ancient Sumerian city of Ur, including the city's Royal Cemetery, where more than 1,800 tombs were found. The importance of this find was rivaled only by the discovery of the tomb of the Egyptian pharaoh Tutankhamen by Howard Carter in 1922.

The cemetery included tombs dating to as early as about 2500 B.C.E. Sixteen of the burial chambers, probably of the most important people interred there, contained a wide assortment of goods that provide evidence for how the upper classes lived. Sumerian royal burial practices are reflected in the tomb of Queen Pu-abi (ca. 2500 B.C.E.?). The corpse was laid out on a wooden platform, wearing a headdress of gold leaves and ribbons and jewelry made of strung blue lapis lazuli, red carnelian stone, and gold beads. Her body was covered by a delicate web of similar beading.

A cylinder seal bearing the queen's name in cuneiform also accompanied the body. Such seals consisted of a cylinder of stone or clay with raised images on its outer surface. The seal was rolled over wet clay, impressing the clay with an image of the raised carving that served to identify the owner of the seal. Pu-abi was buried with wooden chests that would have held clothes for her to wear in the afterlife. Servants who accompanied her into the tomb took positions around her body and drank poison so that they could serve the queen for eternity.

Lost Cities: Islamic Ayla (Aqaba)

Even though many ancient sites in Southwest Asia have yielded their secrets, archeologists are constantly surprised to find new and previously unexplored ones. The 1986 excavation of the early Islamic city of Ayla, located on the Gulf of Aqaba in what is now southern Jordan, provides a recent example.

Ayla was founded by Islamic settlers in about C.E. 650 and built alongside a previously existing town in accordance with early Islam's teachings that Mus-

ARCHEOLOGICAL DISCOVERIES

C.E. 1838 British officer Sir Henry Rawlinson translates Behistun Inscription, leading to the deciphering of the cuneiform script of ancient Mesopotamia

C.E. 1842 French consul Paul Emile Botta excavates the Assyrian city of Nineveh

C.E. 1899 German archeologist Robert Koldewey conducts first scientific excavation in Southwest Asia at the ancient city of Babylon

C.E. 1922–1934 English archeologist Sir Leonard Woolley leads excavation of ancient Sumerian city of Ur

C.E. 1948 Turkish archeologist Tashin Özgüç (1916–2005) excavates Kütulpe Kanesh, an important ancient center of trade between Anatolia and Mesopotamia

C.E. 1949 Radiocarbon dating is invented, making possible detailed studies of Stone Age cultures of Mesopotamia

C.E. 1950s Archeological studies of plant and animal remains uncover roots of agricultural development in ancient Southwest Asia

C.E. 1970s Archeologists in Near East and Southwest Asia focus efforts on preservation of existing sites rather than discovery of new ones

C.E. 1986 Discovery of lost Islamic city of Ayla beneath the modern-day Jordanian city of Aqaba

C.E. 2000 Unlooted tomb, dated to 2300 B.C.E., discovered at Umm el-Marra, 25 miles (40 km) east of modern-day Aleppo in Syria with bodies of two women and two children, gold and silver ornaments, and lapis lazuli jewelry inside

C.E. 2002 Wall paintings and archive of ancient tablets, dating to the mid-second millennium B.C.E., discovered at the site of Qatna, Syria

C.E. 2005 Archeologist Eilat Mazar discovers large building in Jerusalem, possible the tenth-century B.C.E. palace of King David

lims should live in communities apart from those of other faiths. Then as now, Ayla (the modern-day city of Aqaba) was an important port in which goods from Egypt, Asia, and India entered the Arabian Peninsula. An earthquake destroyed the city in C.E. 1068, and sands soon covered its ruins. Over time, the city of Aqaba developed on the site, covering and obliterating all traces of the ancient city.

The site was discovered while preparations were being made for the Aqaba Yacht Club and a new luxury hotel to be built at the location. Archeologists from the University of Chicago and the Jordanian Ministry of Antiquities dug down through the sands and ruins, revealing the 400-year history of the forgotten community of Ayla. The site shows clear evidence of Islamic city planning. The corners of the city's outer walls were centered on the four cardinal points of the compass (north, south, east, and west). Following the pattern of other Islamic cities, the palace of the emir, the political leader of the community, was built to the *qibla* side of the mosque. The qibla points out the direction of Mecca towards which Muslims must pray.

A sack of gold coins from Egypt found at Ayla dates the site to at least C.E. 1013. It is thought that a North African merchant may have buried the coins at roughly the same time that Ayla was attacked by local Bedouin raiders. Historical records show that the surviving population was sold into slavery and the city was abandoned. Evidence of its final destruction is found in the foundations of its outer walls, which were cracked as a result of the 1068 earthquake.

Ayla is an example of how archeology can reveal the history of a people and a place and enhance what little was recorded in governmental records and chronicle accounts. The achievements of those living in southwest Asia are still being uncovered today, allowing historians to constantly reevaluate the lives, beliefs, and actions of those who made civilization a reality five thousand years ago.

See also: Assyria; Babylonia; Darius I, the Great; Islam; Language and Writing; Mesopotamia; Persia; Sumer; Ur.

FURTHER READING

Aruz, Joan, ed. *Art of the First Cities: The Third Millennium B.C. from the Mediterranean to the Indus*. New York: Metropolitan Museum of Art, 2003.

Bertman, Stephen. *Handbook to Life in Ancient Mesopotamia*. Oxford: Oxford University Press, 2003.

Kramer, Samuel Noah. *Cradle of Civilization*. Alexandria, VA: Time-Life Books, 1978.

Lloyd, Seton. *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. New York: Thames and Hudson, 1984.

Rice, Michael. *Archaeology of the Arabian Gulf, c.5000–323 B.C.* London: Routledge, 1994.

Silverbury, Robert, ed. *Great Adventures in Archaeology*. Omaha: University of Nebraska Press, 1997.

Wilkinson, Philip, and Jacqueline Dineen. *Mysterious Places: The Lands of the Bible*. New York: Chelsea House, 1994.

Zettler, Richard L., and Lee Horne, eds. *Treasures from the Royal Tombs of Ur*. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology, 1998.

Art and Architecture

Creative artistic expression throughout the ancient Near East and Southwest Asia, from the smallest decorative objects to the most imposing urban structures, was meant not only to please the eye but also to communicate the values of the **artisan's** culture. Art and architecture therefore provide key insights into the daily life of ancient Southwest Asian people.

Sumerian art and architecture, for example, emphasized religious activities and beliefs, and the most important buildings in a Sumerian city were dedicated to worship of the local deity. Similarly, the massive architecture of the militaristic Babylonian and Persian empires was meant to create a sense of awe and to impress the viewer with the power of those kingdoms' rulers.

ART

Ancient Mesopotamian art reveals details of social organization that facilitate an **historical understanding** of the cultures that produced it. The subjects that artists chose, and how the artist portrayed those subjects, reflect contemporary social conventions and what members of the culture considered important. For illiterate nomadic societies, such as the Scythians of Central Asia who invaded Anatolia (modern-day Turkey) in the seventh century B.C.E., art often provides the best surviving evidence of their cultures.

Figurines

The Sumerians, who inhabited southern Mesopotamia in the fourth and mid- to late third millennium B.C.E., produced thousands of small baked clay figurines. These statues portray both men and women, and most depict the subject praying or making an offering to a god. The figurines feature individuals from various social classes. Some represent government officials wearing highly decorated cloth as a sign of office. Others depict warriors arrayed in battle gear that includes a war axe and a close-fitting helmet. Raised patterns on the helmets mimic slightly curled hair and a pair of ears, evoking an image of the warrior's bare head. Prisoners of war are displayed naked and bound with ropes.

A comparison of Sumerian art to Egyptian art of the same **era** reveals significant differences in social attitudes between the two cultures. While Sumerian art depicts a variety of classes, art produced in Egypt during the same period relegates com-

"The Tower of Babel" is an oil painting on panel created by the Dutch artist Pieter Brueghel the Elder in 1563. Many scholars believe that the great stepped platforms of ancient temples, called *ziggurats*, which dominated Babylonian cities, may have inspired the Biblical story about the tower of Babel. (Pieter Brueghel the Elder/The Bridgeman Art Library/Getty Images)

moners to one of three subordinate social roles: slaves, servants, or farmers. In addition, Egyptian art of the third millennium B.C.E. portrays politically or socially prominent individuals as physically larger than those in subordinate roles. Sumerian figurines, by contrast, show all members of society with a certain amount of dignity and in a more representative scale. This suggests that Sumerian society likely was more **egalitarian** than Egyptian society at this time.

Metalwork

Metalwork from the ancient world, whether made of precious materials such as gold or silver, or wrought from relatively inexpensive ones such as iron, is invaluable to historians and **archeologists**. Pottery can be smashed into shards, and **textiles** will quickly rot and decay, but metal **artifacts** can remain intact for millennia.

Because southern Mesopotamia lacks natural sources of metal ores, the Sumerians and later Babylonians were forced to import gold from Egypt and silver, copper, lead, and iron from Anatolia. Despite the shortage of local materials, southern Mesopotamian metalsmiths produced intricate work such as a metal sculpture of a male goat caught in a golden thicket dating to about 2500 B.C.E. The goat, a symbol of fertility, is caught in a

tree that symbolizes Inanna, the goddess of love and fertility. Here again, the subject matter reflects the Sumerian community's pressing concern with successful reproduction and group survival.

The nomadic Scythians, who occupied much of Anatolia from the seventh to the first centuries B.C.E., left a wealth of metal artifacts that have allowed scholars to reconstruct this ancient culture. Archeologists have excavated scores of Scythian drinking vessels, plates, and pins decorated with scenes of warriors in battle camp and sitting around watch fires. Breastplates used to protect Scythian horses in battle feature scenes of fierce conflict between real and mythical animals. A fourth-century B.C.E. depiction of a warrior riding at full gallop offers a unique insight into Scythian warriors in combat. Using only a bridle and reins to control his horse, the warrior prepares to strike at an unseen enemy with his knife. His footwear has no heels, indicating that he is riding without stirrups.

Mosaics

Mosaics—images created by combining small pieces of different materials to form a distinct visual pattern—have been found throughout the ancient Near East and Southwest Asia. Early mosaics typically portrayed scenes of hunting or other pastimes. Mosaic was a favored art form of both the **Hellenistic** Greeks, who controlled much of the region from the fourth through first centuries B.C.E., and of the Romans, who subsequently defeated the Greeks and replaced them as rulers of the region.

Some of the most impressive mosaics in Southwest Asia are located in the city of Madaba, in modern-day Jordan. They date to the second through sixth centuries C.E., when the region was under Roman, and later Byzantine, control. Perhaps the most famous of these mosaics is a sixth-century floor map of Southwest Asia that originally measured 52 feet (16 m) long and 20 feet (6 m) wide. It showed every major city, valley, oasis, and river from the area now occupied by Lebanon, south to the Nile River delta, and west to the deserts of eastern Jordan. Only a small portion of it remains intact, including a section detailing the major buildings and walls of the ancient city of Jerusalem.

Mosaics of a later era are tied to religious and political developments in the region. For example, some early Christians interpreted the Biblical commandment prohibiting graven images to mean that no human or animal could be portrayed in art. The Byzantine emperor Leo III (r. 717–741) decreed in 726 that any such images already existing be altered. The Madaba mosaics, as well as others also located in what is now Jordan, were defaced. Many others were partially destroyed.

Islam, which spread throughout Southwest Asia in the late seventh and eighth centuries C.E., also prohibited the portrayal of human images in art. Nevertheless, Islamic artists embraced the mosaic art form, creating elaborate geometric designs as well as mosaics that recorded in Arabic script passages from the Koran, the Islamic holy text. Islamic religious architecture features generous use of interior mosaics on both the walls and ceilings of mosques.

ARCHITECTURE

Southwest Asia was the site of the world's earliest human settlements and its first cities. Nearly 10,000 years ago, inhabitants of Anatolia planned communities to maximize local resources and protect themselves from attack by hostile neighbors. By the fourth millennium B.C.E., they were building monumental structures that dominated the landscapes of the early Mesopotamian **city-states**.

CITY PLANNING

The oldest known human settlement, Çatal Huyuk, in north-central Anatolia, shows signs of deliberate planning. Inhabited as early as 7500 B.C.E., its residents chose to build groups of houses that shared common walls rather than freestanding houses for each family. The entrance to each home consisted of a hole in the roof, which also provided light and allowed smoke from cooking fires to escape. The arrangement of houses, and the limited access to their interiors, made the settlement easier to defend from invaders. Invasion was a constant threat in southern Mesopotamia as well, so the Sumerians built thick defensive walls around cities such as Ur, Uruk, and Lagash. Farmers lived inside the walled city and walked out to the surrounding fields each day.

Like most Mesopotamian cities, Babylon was surrounded by massive defensive walls featuring several gates to allow traffic in and out of the city. The brightly decorated Ishtar Gate, reconstructed in what is now Iraq, was the best known of the city gates of ancient Babylon. (Bruno Barbier/Robert Harding World Imagery/Getty Images)

The center of every Sumerian city was occupied by religious structures, including a temple complex containing schoolhouses and grain warehouses, as well as administrative buildings such as palaces and law courts. This layout, in which government buildings were located in close proximity to religious structures, reinforced the connection between religion and royal authority in Mesopotamian society.

Religious and Political Architecture

The most important structure in a Sumerian or Babylonian city-state was the *ziggurat*. As the center of religious worship for residents, it was the largest and tallest structure, physically dominating the city. A ziggurat consisted of a series of two to seven rectangular stone platforms stacked atop one another, each smaller than the one immediately below it. A staircase led to the top of the ziggurat, where priests performed sacrifices at an open-air altar dedicated to the city's patron god or goddess. The sheer size of the ziggurat reflects the dominant role religion played in ancient Mesopotamian daily life.

Ancient cultures, most notably the Babylonian and Persian empires that dominated the region from the seventh through fourth centuries B.C.E., also expressed political power through their architecture. The Babylonian king Nebuchadrezzar II (r. 604–562 B.C.E.) made a statement of his power by having the Ishtar Gate constructed on the north side of the capital city of Babylon. Built in about 575 B.C.E. to honor Ishtar, the Persian goddess of love and fertility, the gateway and surrounding walls stood 47 feet (14 m) tall and 32 feet (10 m) wide. The brick, containing five vertical bands of artwork, was covered in gold leaf and bright turquoise glaze, making it glow in the sunlight. The massive and sumptuous structure displayed not only the king's wealth and power, but also his great respect for and close relationship to the goddess. The expense of its

construction was intended to awe his subjects and strike fear in his enemies. In this respect, it is typical of much ancient Southwest Asian art and architecture, combining elements of both the sacred and the **secular** to make a statement about the culture that produced it.

See also: Archeological Discoveries; Assyria; Babylonia; Harappa and Mohenjo-Daro; Mesopotamia; Scythians; Sumer; Ur.

FURTHER READING

Artamonov, Mikhail Ilarionovich. *The Splendor of Scythian Art: Treasures from Scythian Tombs*. New York: Praeger, 1969.

Curtis, John, and Nigel Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. Berkeley: University of California Press, 2005.

Leacock, Helen, and Richard Leacock. *The Buildings of Ancient Mesopotamia*. Reading, MA: Addison-Wesley, 1974.

Leick, Gwendolyn. *A Dictionary of Ancient Near Eastern Architecture*. London: Routledge, 1988.

McKeon, John F.X., ed. *The Art of Sumer and Akkad*. Boston: Museum of Fine Arts, 1973.

Müller, Carl Otfried. *Ancient Art and Its Remains*. London: Adamant Media, 2005.

Reeder, Ellen, and Michael Treister. *Scythian Gold*. New York: Abrams, 1989.

Ussishkin, David. *The Conquest of Lachish by Sennacherib*. Tel Aviv, Israel: Tel Aviv University Publications, 1982.

Wilber, Donald Newton. *Persepolis: The Archaeology of Parsa, Seat of the Persian Kings*. Princeton, NJ: Darwin Press, 1989.

Assyria

Region of northern Mesopotamia located on the upper Tigris River and center of two influential empires in ancient Southwest Asia. The region took its name from Assur, the original capital of the first of these empires. The Assyrians built the largest standing army in the region and used it to control northern Mesopotamia from about 2000 B.C.E. to 612 B.C.E.

The earliest evidence of Assyrian kingship dates to ca. 2000 B.C.E., but the first king to project Assyrian power was Shamshi-Adad I (r. 1808–1776 B.C.E.). He conquered neighboring territories and consolidated royal authority over all northern Mesopotamia. Assyria's location, trade, and military power brought it into conflict with the Babylonian kingdom to the south. Babylonia's king Hammurabi (r. 1792–1750 B.C.E.) conquered Assyria shortly after assuming the throne.

Babylon's dominance of Assyria lasted a century, during which time Assyria broke into a number of smaller territories ruled by **vassal** kings dependent on the Babylonians. Ashur-uballit I (r. ca. 1365–1330 B.C.E.) conquered these lands to create the first true Assyrian Empire, reigniting a rivalry between Assyria and Babylon that lasted until the twelfth century B.C.E. In 1120 B.C.E., the Assyrian king Tiglath-Pileser I (r. ca. 1115–1076 B.C.E.) began a new period of territorial conquest and eventually ruled over a region stretching from the Mediterranean Sea in the west to the Tigris River in the east and as far north as the Black Sea.

The kings who succeeded Tiglath-Pileser I were politically weak, and for the next two centuries Assyria fought for dominance of the region with the neighboring kingdom of Urartu and endured invasions by Aramean nomads from the south. Assyria's fortunes rebounded under King Ashurnasirpal II (r. ca. 883–859 B.C.E.), who established the second Assyrian Empire. He conquered the Arameans and reasserted Assyrian control from the Mediterranean Sea to the Euphrates River. Under Ashurnasirpal II, the Assyrians built the largest professional standing army seen to date and developed a reputation as superior warriors.

ASSYRIA

CA. 2000 B.C.E. Earliest evidence of Assyrian kingship

1808–1776 B.C.E. Reign of Shamshi-Adad I, first powerful king of Assyria, who extends Assyrian authority over all of Mesopotamia

CA. 1790–1690 B.C.E. Assyria breaks up into a number of small territories ruled by vassal kings subject to the rule of Babylon

CA. 1365–1330 B.C.E. Rule of King Ashur-uballit I, who reunites fragmented Assyrian lands, creating first Assyrian Empire

CA. 1115–1076 B.C.E. Reign of king Tiglath-Pileser I, who extends Assyrian borders from the Mediterranean Sea east to the Tigris River and north to the Black Sea

CA. 1090–883 B.C.E. Assyria struggles with northern kingdom of Urartu and southern Aramean nomads for control of conquered territory

CA. 883–859 B.C.E. Reign of Ashurnasirpal II, who defeats the Arameans and founds the second Assyrian Empire

612 B.C.E. Babylonian king Nabopolassar invades and destroys the second Assyrian Empire

The rulers who followed Ashurnasirpal II built on his success, but by the early eighth century B.C.E., the familiar pattern of internal conflict, invasion, and weak kings followed by stronger rulers was reestablished. It ended only 612 B.C.E. when the Babylonian king Nabopolassar (r. 626–605 B.C.E.) invaded and destroyed the Assyrian Empire.

The king's power came from his dual roles as head of the military and high priest to Ashur, the god of war and the most important of the Assyrian gods. However, while brutal in warfare, Assyrian kings also encouraged the spread of learning, architecture, and art that celebrated their military successes and interaction with their gods. Ashurnasirpal II oversaw a flowering of art and architecture in Assyria, sponsoring the construction of monumental building projects such as the botanical and zoological gardens and the Great Ziggurat in the city of Nimrud. He also built a library in Nineveh filled with **cuneiform** tablets containing religious texts, literature, and scientific findings.

See also: Arameans; Babylonia; Culture and Traditions; Sumer; Technology and Inventions.

FURTHER READING

Healy, Mark. *The Ancient Assyrians*. London: Osprey, 1991.

Larsen, Mogens Trolle. *The Conquest of Assyria: Excavation in an Antique Land*. New York: Taylor and Francis, 1996.

Reade, Julian. *Assyrian Sculpture*. Cambridge, MA: Harvard University Press, 1999.

Russell, John Malcolm. *The Final Sack of Nineveh: The Discovery, Documentation and Destruction of Sennacherib's Palace at Nineveh, Iraq*. New Haven, CT: Yale University Press, 1998.

Babylonia

Southern region of Mesopotamia that was home to one of the dominant cultures in the ancient Middle East. Babylonia's northern frontier began about where the Tigris and Euphrates rivers make their nearest approach to one another. From there it stretched south to the regions of Sumer and Akkad and other independent **city-states** near the Persian Gulf. Between the eighteenth and sixth centuries B.C.E., Babylonia enjoyed several peaks of power and influence, alternating with periods of decline, until its final collapse in 539 B.C.E.

TURNING POINT

The Hanging Gardens of Babylon

The Hanging Gardens of Babylon was one of the Seven Wonders of the Ancient World. According to the Greek historian Diodorus Siculus (90–30 B.C.E.), the Babylonian king Nebuchadrezzar II (r. 604–562 B.C.E.) built the gardens for his wife, who was raised in a mountainous area of Persia and missed the landscape of her homeland. To make her happy, Nebuchadrezzar built a multilevel garden, filled with terraces planted with exotic and colorful plants brought from his wife's homeland and from throughout the empire. The gardens would not have hung as from cables, but would have draped over the walls of the garden. Even more impressively, Diodorus Siculus claims that Nebuchadrezzar also built a huge lake on which he, his wife, and members of the royal family could sail. To create such an oasis in the midst of a desert, where water was a valuable resource not to be wasted, was a testament to Nebuchadrezzar's power.

In addition to Diodorus Siculus, the Greek geographer Strabo (63 B.C.E.–C.E. 24) also vividly described the gardens in his writings. However, no Babylonian document mentions such gardens in Babylon, and **archeologists** have found no evidence of them. The Greek writers may have been referring to the gardens in the ancient Assyrian capital at Nineveh and simply situated them in Babylon. Whether a myth or a lost reality, the Hanging Gardens symbolize the active efforts humans were exerting to control the environment and recreate it in a manner more suited to their tastes.

RISE AND FALL OF BABYLONIA

CA. 2350–1900 B.C.E. Akkadian rule of Babylonia

CA. 2334–CA. 2279 B.C.E. Reign of Sargon the Great, most prominent of Akkadian kings

CA. 2000–1595 B.C.E. Old Babylonian Period, marked by Amorite control and expansion of Babylonian territory

1792–1750 B.C.E. Reign of Hammurabi, greatest king of Old Babylonian Period and creator of one of the world's earliest law codes

CA. 1595 B.C.E. Hittites from Anatolia (modern-day Turkey) and Kassites from what is now Iran conquer Old Babylonian Empire

CA. 1595–1000 B.C.E. Middle Babylonian Period, during which Babylonian culture and religion continues to flourish in Mesopotamia under foreign domination

612–538 B.C.E. Neo-Babylonian Empire arises, dominating Mesopotamia until toppled by Persian Empire

HISTORY

By the early third millennium B.C.E., a dozen or so cities had arisen throughout Babylonia. These early urban areas thrived under the rule of the Akkadians (ca. 2350–1900 B.C.E.), and especially during the reign of the Akkadian king Sargon the Great (ca. 2334–ca. 2279 B.C.E.). Following the Akkadians,

Taken from an 1886 series titled "Seven Wonders of the World," by German artist Ferdinand Knab, this lithograph depicts the artist's conception of the Hanging Gardens of Babylon. Although renowned as one the Seven Wonders of the Ancient World, archeologists have discovered no physical evidence of the Hanging Gardens. (Knab, Ferdinand (1834–1902)/Archives Charmet, Private Collection/The Bridgeman Art Library)

THE BABYLONIAN EMPIRE, CA. 625-539 B.C.E.

The Babylonian Empire spanned most of southwest Asia, controlling lands from modern-day Egypt in the west to present-day Turkey (Anatolia) in the north and extending as far eastward as Persia.

Babylonia fell under the control of a succession of invaders, including the Elamites from what is now Iran and the Amorites who lived west of the Euphrates. By about 1900 B.C.E., the empire these peoples created eventually expanded to reach the Mediterranean Sea in the west, the Persian Gulf in the east, Anatolia to the north, and the Arabian Desert to the south.

Throughout its history, Babylonian society took as its model the culture that arose in the southern region of Sumer during the fourth millennium B.C.E. Sumerian influence remained strong even though power in the region changed hands several times, and many Sumerian cultural elements persisted for thousands of years. These included **cuneiform** writing, **polytheistic** religions, and strict social structures and king-centered political organization.

The post-Akkadian history of Babylonia is divided into three **eras**: the Old Babylonian Period

(ca. 2000–1595 B.C.E.), the Middle Babylonian Period (ca. 1595–1000 B.C.E.) and the Neo-Babylonian Period (612–539 B.C.E.). The Old Babylonian Period was marked by Amorite control over the region (the Amorites were a **Semitic** people living west of the Euphrates River). It is during this period that the renowned King Hammurabi (r. 1792–1750 B.C.E.) ruled and developed a set of laws , which is the oldest, complete law code still in existence today.

After Hammurabi, a series of weak kings came to the throne. By 1595 B.C.E., Babylonia had been conquered by the Hittites from Anatolia and the Kassites from what is now Iran. Nevertheless, the religious, political, and social institutions that defined Babylonia continued during these successor states until the Persians conquered the region in the sixth century B.C.E.

CULTURE

Babylonian gods were associated with aspects of nature, such as the wind, rain, and water. The most important ones were seen as the founders and sometimes patrons of the major cities in the region. The Babylonians viewed their gods as fickle, and as likely to harm them as protect them. An official class of priests acted as intermediaries between the citizens and their patron deity, offering sacrifices to honor or appease the gods in hopes of protecting the city and ensuring its prosperity.

An innovative people, the Babylonians built on the earlier developments in the area of mathematics. They developed a base-60 numerical system whose influence is preserved to this day in the division of hours into 60 minutes and minutes into 60 seconds. The division of the circle into 360 degrees is also a legacy of the Babylonians. Their mathematical abilities also enabled them to develop the engineering skills needed to build impressive projects such as extensive irrigation systems, strong defensive walls for their cities, and the massive *ziggurats*. Babylonians were also among the world's earliest astronomers, building observatories near their temple sites. Babylonian astronomy was inspired by the belief that the gods communicated to humans through heavenly signs, which led them to identify constellations, create the concept of the zodiac, and develop astronomical tables to predict eclipses and other heavenly phenomena. Their fascination with the skies reflected the widespread notion that what occurred in heaven provided clues to future events on earth.

See also: Assyria; Chaldeans; Hammurabi; Hittites; Mesopotamia; Sumer; Technology and Invention.

FURTHER READING

Albenda, Pauline. *Ornamental Wall Painting in the Art of the Assyrian Empire*. Boston: Brill Academic Publishers, 2005.

Dalley, Stephanie, ed. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. New York: Oxford University Press, 1998.

Leick, Gwendolyn. *The Babylonians: An Introduction*. New York: Routledge, 2003.

Saggs, H.W.F. *The Babylonians*. Norman: University of Oklahoma Press, 1995.

Van de Mieroop, Marc. *A History of the Ancient Near East, ca. 3000–323 BC*. Malden, MA: Blackwell, 2004.

———. *King Hammurabi of Babylon: A Biography*. Malden, MA: Blackwell, 2005.

Bible

The sacred texts of Judaism and Christianity and written between the eighth century B.C.E. and the second century C.E. Although composed hundreds of years apart by adherents of two different religious movements, the texts combined to form a common set of Christian scriptures during the late fifth and early sixth centuries C.E.

The first and older set of texts comprises the Hebrew Bible, or scriptures, known to Christians as the Old Testament. These texts include the five books of the Torah (Genesis, Exodus, Leviticus, Numbers, and Deuteronomy), revered teachings generally attributed to the prophet Moses and which form the basis of Jewish religious law. The Hebrew scriptures also contain books with the teachings of the prophets and other sacred books with psalms and proverbs. The Hebrew Bible also traces the history of the people and kingdom of Israel and the covenant between the Israelites and their god, Yahweh.

Scholars believe that the Torah was composed in the tenth century B.C.E. and transmitted orally until being written down between the eighth and sixth centuries B.C.E. The later books were written at various times, with the last ones composed in the fifth century B.C.E. The Hebrew scriptures were originally written in Hebrew, the religious language of Judaism. Small portions, including the book of Daniel, were written in Aramaic, the language spoken by most Jews in daily life in the Middle East.

The second part of the Bible contains the Christian scriptures, also known as the New Testament. These books were written in Greek between about C.E. 60 and 120 to help convert the Greek populations of Asia Minor to Christianity. The New Testament contains four books, known as Gospels (the Gospels of Matthew, Mark, Luke, and John), which contain material on the life and teaching of Jesus of Nazareth (ca. 4 B.C.E.–ca. C.E. 30), who founded the Christian religion and whom Christians regard as the son of God. The New Testament also includes the Acts of the Apostles, which details the efforts of Jesus's followers to spread his teachings after his death. Lastly, it contains letters of instruction written by Saint Paul and other early church leaders to the fledgling Christian communities.

Jews do not believe that Jesus was the son of God, so they do not include the New Testament as part of their religious faith or tradition. Christians accept both the testaments as sacred texts; however, the New Testament is the heart of their faith since it focuses on the teachings of Jesus. Because Muslims, Jews, and Christians revere many of the same religious figures, such as the Hebrew **patriarchs** Abraham and the prophet Moses, Muslims also accept many parts of the Bible as divinely inspired truth. However, they view Jesus as a prophet, much like Moses, rather than as the son of God.

See also: Christianity; Islam; Jews and Judaism; Language and Writing; Religion.

FURTHER READING

Friedman, Richard E. *Who Wrote the Bible?* New York: HarperCollins, 1997.

Miller, Stephen M. *The Bible: A History—The Making and Impact of the Bible*. Intercourse, PA: Good Books, 2003.

Silberman, Neil Asher, and Israel Finkelstein. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Touchstone, 2002.

Byzantine Empire

Eastern Mediterranean realm that evolved from the Greek-speaking portion of the Roman Empire beginning in the late third century C.E. The empire took its name from the city of Byzantium (modern-day Istanbul), which served as the capital of the Eastern Roman Empire. Although the Western Roman Empire would fall to Germanic invaders in the late fifth century C.E., Byzantium would survive for another 1,000 years.

In the late third century C.E., Emperor Diocletian (ca. C.E. 245–312) split the Roman Empire into eastern and western halves to facilitate governance of its far-flung domains. Faced with Germanic invasions and a

THE BYZANTINE EMPIRE, CA. C.E. 800-1000

At its height, the Byzantine Empire spanned all of modern-day Turkey and Greece, as well as much of Italy and parts of eastern Europe.

significantly weakened economy, Emperor Constantine I (r. C.E. 306–337) decided in 330 to leave the deeply troubled western half and take direct control over the eastern half. The east enjoyed easy access to abundant Egyptian grain harvests, political and social stability, a healthy climate, a thriving economy, and vibrant cultural centers; it also was under no particular threat of invasion. These factors made it appealing to the emperor, as did its early adoption of Christianity, in which he had privately come to believe.

When Constantine moved to his new capital (later renamed Constantinople in his honor), he took the wealthiest and most talented officials with him. This left the western empire under the rule of a succession of weak emperors, who quickly lost control over its territory and military. By 476, the western empire had collapsed. The eastern half thrived thanks to its resources and Constantine's ability to establish a new style of imperial authority in an increasingly non-Roman pattern, a style that was followed by his imperial successors.

CULTURE

The Byzantine Empire, as the realm of Constantine and his successors came to be known, was a mix of Roman, Greek, Christian, and, eventually, Islamic influences. The empire maintained Roman political structures such as the Senate, but Eastern elements were increasingly introduced. For example, the emperor in the West had been considered first among equals, dressed like ordinary citizens, and was accessible to his subjects. In the east, Constantine and his successors adopted a more formal and remote

style of ruling. They gave audience to few people, and those allowed to see the emperor were required to follow elaborate court rituals emphasizing their inferiority, such as not speaking until spoken to, and never showing their backs to the emperor.

More importantly, the emperor exercised authority without significant interference from the Christian church. By the fifth century C.E., the bishop of Rome had emerged as a political force to rival the emperors of the crumbling Western Roman Empire. His counterpart in the east, the bishop of Constantinople, faced a more powerful imperial presence that kept the church's power in check. By C.E. 1054, the Greek-speaking Eastern Orthodox Church and the western, Latin-speaking Roman Catholic Church split after centuries of disagreement over specific beliefs, practices, and the supremacy of the Bishop of Rome. While the Roman Catholic Church's **secular** power increased steadily in the following centuries, the Eastern Orthodox Church remained subordinate to Byzantine imperial authority.

Seven centuries before Constantine's arrival, **Hellenistic** culture had been introduced to southwest Asia by the Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), who had conquered the region. Constantine and his successors found that the people's acceptance of Greek cultural ideas freed rulers from the restrictions of traditional Roman politics and society. These ideas included the opportunity for strong emperors to rule without interference from the Senate, to spend state revenue as they saw fit, and to openly practice Christianity.

Byzantine art focused on religion, which was at the center of life and activity. Icons, portraits of religious figures, predominated. Because early Christians widely considered realistic representation of objects to be a form of idol worship, Byzantine icons featured rigid, two-dimensional representations of the saints, Jesus, and especially Jesus' mother, Mary. Early Byzantine architecture continued imperial Roman traditions, including extensive use of the arch. The basilica, a long structure composed of a large central aisle separated by rows of columns from two smaller side aisles, was another common Byzantine design, which became associated with larger church buildings. Later Byzantine architecture showed strong eastern influences, such as elaborate domes and heavily decorated or carved exterior walls.

PROBLEMS

The fortunes of Byzantium often relied upon the strengths of its ruler. Weaker emperors bribed would-be invaders, such as Attila the Hun (ca. C.E. 406–453), or used marriage and military alliances to protect their lands. Strong rulers, such as Justinian I (r. C.E. 527–565), waged wars of conquest while stabilizing and centralizing their authority. In the mid-seventh century, Muslim invaders originating in the Arabian Peninsula conquered large areas of the Byzantine Empire. By the eleventh century, the Byzantine emperor's effective authority was limited to the city of Constantinople.

As Islamic forces captured increasingly larger tracts of Byzantine territory, Byzantine emperor Alexius I Comnenus (r. C.E. 1081–1118) requested military assistance from the West. In response, Pope Urban II (r. C.E. 1088–1099) called for a crusade in 1095, with the intention of rallying forces to restore control of the Middle East to Christian authority. Over the next 200 years, nine crusades of decreasing effectiveness were launched against the Muslims. When it at last became clear that recapturing the Holy Land was an unrealistic goal, the crusades ended and Byzantium was left to fend for itself. During this time, the empire waxed and waned, occasionally growing to include much of the Balkans and parts of Asia Minor, at other times shrinking to a small area surrounding Constantinople.

In 1453, Sultan Mehmed II (C.E. r. 1444–1446 and 1451–1481), leader of the Ottoman Turks, conquered Constantinople. The fall of the city marked the end of the Byzantine Empire. While the political authority of the Byzantine emperors ended, their style of eastern despotism, the state's role in encouraging a religious agenda, unchecked use of revenue resources to support the state as the ruler wished, military and territorial gains, and cultural influences on education and science continued and grew under the Ottomans.

See also: Christianity; Islam.

FURTHER READING

Corrick, James A. *Byzantine Empire*. San Diego, CA: Lucent, 2006.

Grant, Michael. *Constantine the Great: The Man and His Times*. New York: Scribner, 1994.

Mango, Cyril. *The Art of the Byzantine Empire 312–1415: Sources and Documents*. Medieval Academy Reprints for Teaching. Englewood Cliffs, NJ: Prentice-Hall, 1992.

———. *Byzantium, The Empire of New Rome*. New York: Scribner, 1980.

Marston, Elsa. *The Byzantine Empire*. Tarrytown, NY: Benchmark Books, 2002.

Pohlsander, Hans A. *The Emperor Constantine*. New York: Routledge, 2004.

Psellus, Michael. *Fourteen Byzantine Rulers: Chronographia of Michael Psellus*. Translated by E.R. Sewter. New York: Penguin, 1979.

Canaan *See* Jews and Judaism.

Çatal Huyuk [ku-tal hu-yook]

Site in what is now southwest Turkey, believed to be the world's oldest **Neolithic** urban settlement. The town, which according to **radio-carbon dating** was inhabited by about 7500 B.C.E., had an average population of some 6,000 people. It was built on a 65-foot-high (19.8-m) mound from which it derives its name—Çatal Huyuk means "fork mound" in Turkish. The settlement represents a transition from a hunter-gatherer lifestyle to a sedentary, urban-based existence.˚

The surviving ruins, discovered in C.E. 1958 and first excavated in the early 1960s, provide evidence of how early towns were organized and how buildings were used and decorated. They also offer insights into religious practices of the time. The mud-brick huts found at the site are built side by side and share walls. No pathways run between the buildings. Instead, entry to each structure was gained by a hole in the roof, which was reached by ladders on the outside and inside of the building. The same hole allowed smoke from cooking fires to escape, and fresh air and sunshine to reach the interior.

Each home had a similar floor plan of three defined spaces: a central room connected by stairs or ladders to elevated sleeping platforms, with small storage rooms located on the ground level. The central room served as a kitchen and site for other daily chores. The elevated platforms, which featured stone seating areas, were used not only for sleeping but also served as work areas. The interior walls were finished in smooth plaster and all buildings, inside and out, were decorated with geometric murals and female and male figurines. Painted images vary, depicting hunting scenes, wild animals, and vultures attacking human figures.

While **archeologists** know little of the inhabitants' specific religious beliefs, they have excavated female figurines, perhaps images of a mother goddess, in fields and storage areas. The inhabitants may have placed the figurines in these places as a way to protect ritually the grain stored there. Hundreds of these female figurines have been found in almost all structures excavated so far. Some buildings containing a greater number of icons, images, and graves are thought to be shrines or religious centers. Graves were often located in such buildings, but the dead were also buried under the hearths of homes, where the cooking fires were located. Corpses were placed in a tight sitting position either in baskets or wrapped in reed mats. Collections of bones have

also been located and some skeletons are missing their skulls. Others have skulls covered with plaster and painted to look as they had in life.

Over time, the inhabitants of Çatal Huyuk domesticated sheep and cattle and became less dependent on hunting wild animals. Their diet was supplemented by crops of almonds, peas, and wheat. In addition to farming, they made pottery for storage of food and water, **textiles** for clothing, and mirrors. They fashioned tools out of volcanic rock known as obsidian, and traded excess grain, pottery, and tools for items such as sea shells from the Mediterranean and flint from what is now Syria. Archeologists estimate that the site was abandoned some time around 6500 B.C.E., for unknown reasons.

See also: Agriculture; Anatolia.

FURTHER READING

Balter, Michael. *Goddess and the Bull: Catalhoyuk: An Archaeological Journey to the Dawn of Civilization*. New York: Free Press, 2005.

Chaldeans

People of southern Mesopotamia who led a revolt against the Assyrian Empire in the first millennium B.C.E. and established the Neo-Babylonian Empire. The Chaldeans were one of many militaristic peoples in Mesopotamia living in the shadow of the Assyrians.

Upon the death of the Assyrian ruler Ashurbanipal (r. ca. 669–627 B.C.E.), the Chaldeans, under their leader Nabopolassar (r. 626–605 B.C.E.), attacked and conquered Assyrian territory including the city of Babylon. The Chaldeans received assistance from the Medes, a people living in what is now Iran, who were challenging Assyrian dominance over the region. In 609 B.C.E., Nabopolassar captured the Assyrian capital city of Nineveh, thus completing the destruction of the Assyrian Empire.

Nabopolassar's son, Nebuchadrezzar II (r. 604–562 B.C.E.), succeeded his father as king of the Neo-Babylonian Empire and became the most prominent of the Neo-Babylonian kings. He united the Chaldeans with the Medes by marrying the daughter of the Medean king, and spent his reign expanding Babylonian power. In 597 B.C.E., Nebuchadrezzar attacked the Kingdom of Judah and captured Jerusalem. After putting down a popular rebellion there in 586 B.C.E., he punished the inhabitants by taking their lands and homes and forcing them to move in small groups to other places in his kingdom. This event, known as the Babylonian captivity, lasted until ca. 538 B.C.E., when the Persian Empire defeated the Babylonians and allowed the Jews to return to their homeland.

Although an eager and successful warrior, Nebuchadrezzar spent much of his reign rebuilding Nineveh and Babylon and erecting temples, libraries, and new defensive walls. Under his reign, Babylon grew to cover more than 500 acres (200 hectares) with city walls wide enough for two chariots to run side by side alongside their tops. However, the building project with which Nebuchadrezzar is most often associated, the Hanging Gardens of Babylon, may not have existed. Supposedly built around 660 B.C.E., the gardens were said to have covered acres with terraced planting beds and included an artificial lake.

Nebuchadrezzar was succeeded by a series of weak kings who were unable to maintain control over the territory that he and Nabopolassar had conquered. In 538 B.C.E., King Cyrus II, the Great, of Persia (r. ca. 559–ca. 530 B.C.E.) combined forces with the Chaldeans' former allies, the Medes, to topple the Neo-Babylonian Empire.

See also: Assyria; Babylonia; Mesopotamia; Persia.

FURTHER READING

Albertz, Rainer. *Israel in Exile: The History and Literature of the Sixth Century* B.C.E. Translated by David Green. Atlanta, GA: Society of Biblical Literature, 2003.

Excavations in present-day Iraq revealed the remains of the city walls of ancient Babylon. Like many cities in the ancient Near East and Southwest Asia, Babylon was partially or completely destroyed and later rebuilt on the same site. (J.P. De Manne/Robert Harding World Imagery/Getty Images)

Sack, Ronald Herbert. *Cuneiform Documents from the Chaldean and Persian Periods*. Selinsgrove, PA: Susquehanna University Press, 1995.

Schomp, Virginia. *Ancient Mesopotamia: The Sumerians, Babylonians, and Assyrians*. New York: Franklin Watts, 2004.

Christianity

Monotheistic religion based on the teachings of Jesus of Nazareth (ca. 4 B.C.E.–ca. C.E. 30); a faith that grew from obscurity and oppression to become the largest and most influential religion in the premodern Western world. Christianity began as a variant of Judaism, but after Jesus' death it moved rapidly in an original direction. The Christian faith spread slowly throughout the Roman Empire with its adherents suffering persecution intermittently for their beliefs. However, the conversion of the Roman emperor Constantine (r. C.E. 306–337) to the faith in the early fourth century C.E. not only helped end the persecution of Christians but also paved the way for the rapid spread of Christianity.

JESUS

Jesus was the son of a Jewish carpenter in the Roman province of Judea, which included the modern-day country of Israel and parts of what is now Jordan. He is believed to have begun preaching publicly at age 30, and his earliest followers were poor fishermen from around the Sea of Galilee who

GREAT LIVES

Jesus of Nazareth

Jesus' recorded concern with and focus on the poorest and least regarded members of society was unusual for the **era** in which he lived. In most ancient societies, a small number of wealthy and powerful individuals wielded near-absolute power over the masses of the poor. Jesus, however, preached that earthly riches were not only unimportant but actually a hindrance to leading an ethical life. He promised the poor that their reward would come in the afterlife and condemned those who were wealthy and powerful on earth for failing to assist those who had less than they did.

Despite his opposition to the existing social order, Jesus rejected violence as a way of bringing about change. He urged his followers to obey Roman law while rejecting the materialistic values that underpinned Roman society. This puzzled and disappointed many of his early followers, who looked to him as the messiah, or promised one, who would free the Jews from Roman domination. However, Jesus stressed that the Kingdom of Heaven he hoped to establish was not an earthly realm, but a social condition in which each person was valued equally and was concerned with the welfare of the group rather than oneself. Jesus thus served as a role model for how to treat other humans with a depth of dignity often lost in daily societal interactions.

came to be known as the apostles. Jesus identified himself as a Jew, and his religious teachings focused on Jewish concepts of moral and ethical behavior.

Jesus, however, broke with Jewish belief and practice in three ways. First, he prophesied about things to come without permission of the Jewish religious leadership. Second, he forgave the sins of the living, which in Jewish tradition only God could do. Third, he promised spiritual salvation for Jews and non-Jews. Some Jews interpreted his message to mean that he would lead them to freedom from their Roman overlords. Thus, they took him for the Messiah, a savior promised in the Hebrew scriptures, who was to lead them out of captivity. However, Jesus did not claim to be the Jewish messiah, but a universal savior. Around C.E. 30, he was arrested in Jerusalem on charges of being a socially disruptive force and was executed on orders from the Roman governor of Judea, Pontius Pilate (r. C.E. 26–36). Christians believe that Jesus rose from the dead three days later.

ORIGINS OF CHRISTIANITY

Following Jesus' death, his followers spread his message. At first, Christianity retained most of the basic elements of Jewish belief and practice, including the need to observe Jewish dietary laws and the requirement that male adherents be circumcised as a sign of the Jewish covenant with God. These aspects of the faith limited its appeal among Gentiles (non-Jews). A convert named Paul of Tarsus, later canonized by the Catholic Church as Saint Paul, convinced early Christian leaders to abandon their insistence on following Jewish law and practice. This widened the appeal of the faith.

Christians focused their early conversion efforts on the Greek-speaking population of the eastern Mediterranean region, particularly communities in Asia Minor (modern-day Turkey). Most of the earliest Christian communities thus grew up not in Judea but along the coast of the Mediterranean Sea and in Asia Minor. Between C.E. 70 and 120, Christian writers recorded the teachings of Jesus in the Gospels (Matthew, Mark, Luke, and John), four books that each take a slightly different approach to the importance and meaning of Jesus's early ideas.

By the second century C.E., Christianity was firmly rooted in Asia Minor and Judea. Because the Romans allowed subject peoples to worship their own gods as well as Roman deities, Christianity made inroads throughout the Roman Empire. Christianity appealed to the poor because of its

CHRISTIANITY

CA. 4 B.C.E. Jesus of Nazareth born

CA. C.E. 27 Jesus begins his ministry

CA. C.E. 30 Jesus crucified in Jerusalem

CA. C.E. 70–120 Christian writers record the gospels, which detail Jesus's life and teachings

CA. C.E. 100–200 Christianity spreads rapidly throughout Judea and Asia Minor

C.E. 313 Roman Emperor Constantine I issues Edict of Milan ordering toleration of the Christian faith

C.E. 1054 Great Schism; Christianity splits between Roman Catholic Church in the west and Greek Orthodox Church in the east

deemphasis on earthly riches and because it promised the faithful the reward of life after death. It also gained popularity among women, who enjoyed few individual rights under Roman law, because it preached equality of the sexes and allowed women to participate in the rites of the faith. Indeed, women served as the leaders of quite a few early Christian communities. By contrast, the wealthy and powerful were less attracted to Christianity initially.

As the Roman Empire fell into political, social, and economic decline, many citizens began to lose faith in traditional Roman gods and adopted Christianity. The faith grew substantially after Constantine ordered its tolerance in C.E. 313 and later conversion to Christianity. By the time the Western Roman Empire fell in C.E. 476, Christianity had spread throughout the Mediterranean world and into many parts of Europe.

THE GREAT SCHISM

According to the Gospels, Jesus chose one of his followers, Peter, to be the leader of the new church. Peter established the first Christian community in Rome, and his successors as bishops of Rome claimed leadership of Christianity in the first century C.E. However, bishops in the older eastern Christian communities did not recognize the bishop of Rome as the leader of the church. They considered bishops in the East as having older claims to authority. This and other disagreements over rites led to tensions between Rome and the eastern Christian communities.

In C.E. 1054, the bishops of Southwest Asia broke with Rome and established the Eastern or Greek Orthodox Christian Church. While the Roman Catholic Church established authority over Christian communities in Western Europe, the Greek Orthodox Church established itself as the representative of Christianity in Eastern Europe and Southwest Asia. This split, known as the Great Schism, continues to this day.

See also: Bible, Jews and Judaism; Religion.

FURTHER READING

Fredriksen, Paula. *From Jesus to Christ: The Origins of the New Testament Images of Christ*. 2nd ed. New Haven, CT: Yale University Press, 2000.

Laurie, Guy. *Introducing Early Christianity: A Topical Survey of Its Life, Beliefs, and Practices*. Downers Grove, IL: Intervarsity Press, 2004.

White, L. Michael. *From Jesus to Christianity: How Four Generations of Visionaries and Storytellers Created the New Testament and Christian Faith*. San Francisco: HarperCollins, 2004.

Culture and Traditions

The values of the early inhabitants of the Near East and Southwest Asia influenced the development of civilizations throughout much of the ancient world. The early cultures that arose in this region, known as the "cradle of civilization," established standards of social behavior and organization and religious belief and practice that were assimilated by later peoples from as far away as Africa and Western Europe.

TRIBAL CULTURE

Prior to the development of agriculture around 8000 B.C.E., Southwest Asia was populated by small, nomadic, hunter-gatherer tribes. These groups of perhaps 30 closely related individuals depended heavily on one another for survival. Members of the tribe embraced cultural values designed to promote group survival. Those values included the importance of blood ties, protecting family honor, individual responsibility and subordination to the group, and a relatively **egalitarian** tradition of social behavior.

The practices of the Scythians, a Central Asian people who invaded Anatolia in the seventh century B.C.E., were in many ways typical of tribal cultures of the region. The nomadic Scythians maintained a tough code of honor that required honesty and absolute loyalty to the tribe and its leader. The chieftain of the tribe was the ultimate judge of honor and could order the punishment or death of anyone suspected of dishonoring the tribe. However, the head of each family in the tribe was responsible for avenging any assault or dishonorable action taken against the family.

Family and tribal honor were particularly tied to the chastity of women. If a woman was sexually assaulted, both she and her family lost honor until her male relatives avenged the assault. Although men fiercely guarded female relatives' honor, this did not translate into a **patriarchal** view of the role of women in Scythian culture. Scythian men and women dressed similarly, and Scythian women were known to have fought next to men in battle. Even young, unmarried women participated in combat, a development that would be unthinkable in the later urban cultures of the region.

The Scythians were not literate, so little is known of their religious beliefs. Scholars suspect that the Scythians, like most tribal cultures, practiced an **animistic** religion, based on a belief that the world is inhabited by spirits that dwell in natural objects or forces. **Archeologists** have discovered rugs in Scythian tombs depicting Tabiti-Hestia, a goddess associated with fire and wild beasts. Interestingly, this is the only deity found in Scythian art, and it is female.

URBAN CULTURE

The development of agriculture around 8000 B.C.E. led to dramatic cultural changes for the societies of Southwest Asia. Hunting and gathering gave way to settled farming, which provided a larger and more secure source of food. As populations increased, villages in the southern Mesopotamian region of Sumer (now southern Iraq) grew into the world's first cities around 3000 B.C.E. The intimate, kin-centered world of the tribe was replaced by one in which people dealt more often with strangers.

A new urban culture developed in Sumerian cities that incorporated some aspects of tribal tradition, but also evolved to reflect the changing social environment. These **patterns of continuity and change** are evident in both the transition from a nomadic to an urban lifestyle, and in the succession of cultures from the Sumerians to the Babylonians, Assyrians, and Persians who followed them.

Sumerian Beliefs

The Sumerians' basic cultural beliefs and rituals reflect their awareness of the precarious nature of their civilization, the survival of which depended on agriculture in an arid region with inconsistent

LINK TO PLACE

Sacred Recipes in Ancient Mesopotamia

The earliest written recipes discovered by archeologists come from Mesopotamia and date to the second millennium B.C.E. The oldest collection of recipes consists of three cuneiform tablets from southern Mesopotamia written in the Akkadian language in the seventeenth century B.C.E. Unlike modern recipes, which include instructions for combining ingredients and recommended cooking times, these ancient "recipes" are merely lists of ingredients.

Food historian Eveline van der Steen argues that the recipes found on these tablets were not used for everyday cooking; she and other historians believe they were intended for religious use. According to van der Steen, all of the recipes described in the tablets are different versions of a meat dish served as a ritual meal to a god in his temple. The meal, which probably included bread, beer, and date cakes and other sweets, was placed behind a curtain, where the god would ritually "consume" it. The king ate the "leftovers" not taken by the god. Because these recipes were for meals that probably served a ritual function, the dishes are not considered typical of the food most often consumed by average Mesopotamians. Still, they provide a valuable glimpse into ancient life in the region.

water supplies. The Sumerian (and later Babylonian) New Year festival, Atiku, was the most important occasion of the year. It celebrated the return of spring and the hope for fertility of crops, animals, and humans in the coming season. The festival began on the first new moon after the spring **equinox**, during the Babylonian month of Nisan (March/April). Every city celebrated *Akitu*, but usually on different days, and some celebrated it again during the fall.

The Sumerians associated Atiku with the original birth described in the creation epic known as the *Enuma Elish*, which was recited on the fourth day of the festival. Originally, the hero in this story was the Sumerian god, Enlil. Later cultures placed their own deities in the hero role; in Babylon, the protagonist was Marduk, and among the Assyrians it was the god Assur. In the story, Enlil slays the goddess Tiamat (chaos) and forms the earth and the heavens from her body. He then creates humankind from the flesh of her son, Kingu.

Atiku included sacred marriage rites between the king and the high priestess of each city. This ritual represented a reenactment of the marriage of the goddess of love and war, Inanna, with her husband, Dumuzi. It was based upon a Sumerian myth that attempted to explain the cause of the changing seasons. In the myth, Dumuzi must spend half of the year in the underworld (fall and winter), during which time Inanna grieves so much for him that nature becomes infertile. During the half of the year when Dumuzi is on earth, Inanna is happy and nature is abundant.

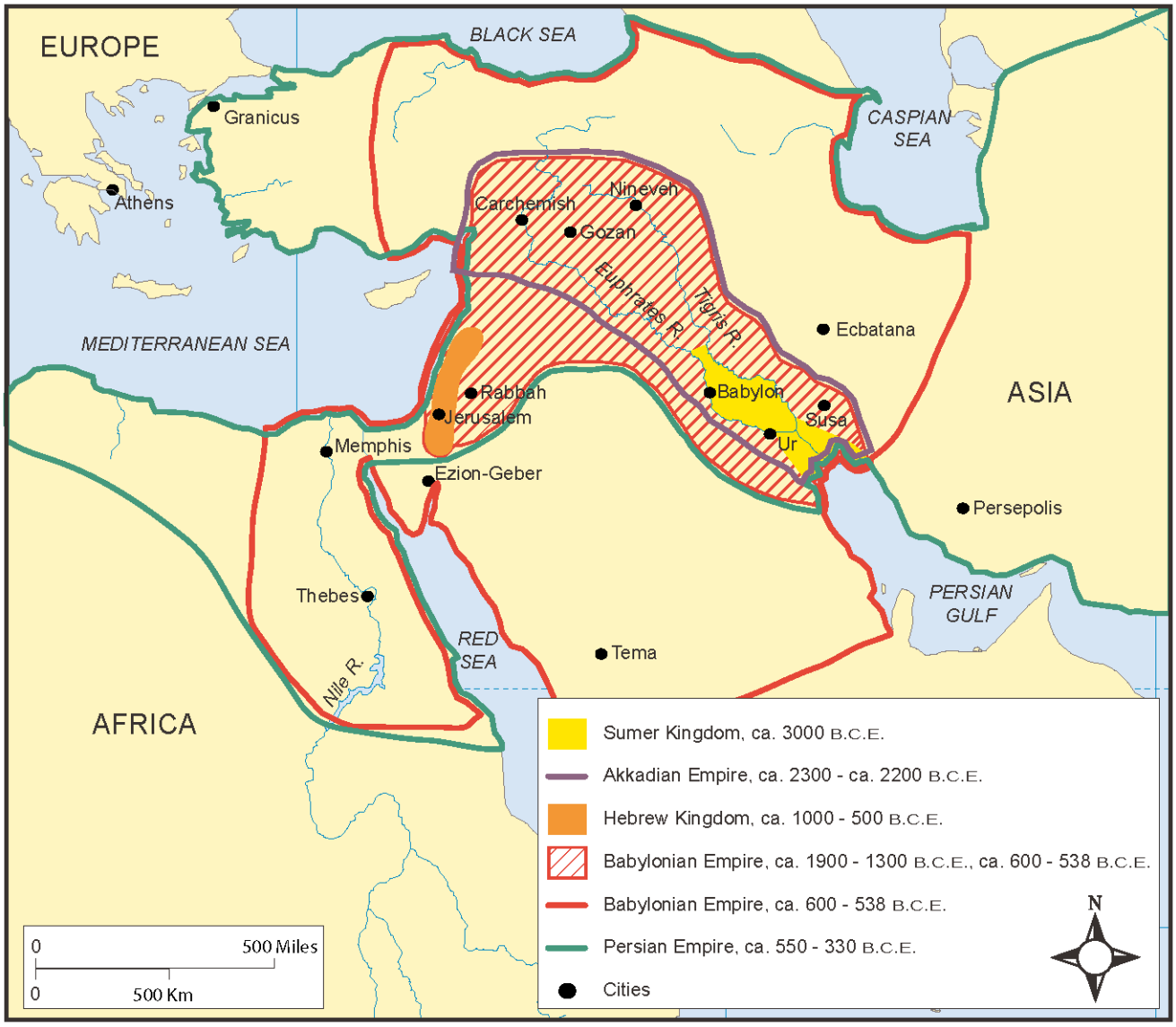
Each month in the Sumerian calendar was dedicated to a different deity, chosen to embody the seasons with which they were associated. The first two months of the new year were named in honor of the original creation deities and mark the rebirth and recreation of society for the coming year. The remaining spring months were dedicated to the fertility goddess and the deities of brewing and flocks and herds. Summer months, when most military campaigns occurred, were named for the goddess of love and war, and the god of justice. Fall months commemorated the harvest god and the deities of hearth and home. The winter months featured festivals to the chooser of the dead and the keeper of the underworld.

Daily Life in Sumer

The average Sumerian was a farmer who worked the fields surrounding the city during the day and retired to houses within the city walls after dark.

MAJOR CULTURAL REGIONS OF THE ANCIENT NEAR EAST AND SOUTHWEST ASIA, CA. 30,000-300 B.C.E.

Ancient civilizations appeared in the region about 4000 B.C.E., rose and fell, spread new ideas, and engaged in war and trade. Through their interactions, cultures blended with and enriched each other over time. By about 375 B.C.E., the Persians controlled a vast area, reigning over an extremely powerful empire that united much of the region.



Sumerian cities were divided into separate quarters for the upper class, or *amelu*, and the rest of the population. Most Sumerians lived in small, apartment-like houses consisting of one or two rooms that adjoined surrounding dwellings. Each house contained an enclosed courtyard and family chapel where the residents worshipped household gods, as well as a space where deceased family members were buried.

The typical diet consisted of cakes or porridge made from barley, occasionally accompanied by cucumber, onions, or beans, and other vegetables as they came into season. Meat, including beef, veal, and mutton, was more common in the cities than in the countryside, although most Sumerians did not eat it daily. The most common drink was a thick ale brewed from barley; even upper-class Sumerians rarely drank wine.

Music was an important part of Sumerian life and culture, but it apparently was ceremonial in nature and not played simply for enjoyment. Music and dancing typically accompanied Sumerian religious and civic ceremonies, such as wedding, funerals, coronations, or public worship. Musicians would symbolically purify their hands by washing them before playing stringed instruments such as harps or lyres. Many of the songs were dedicated to the Sumerian gods, especially to Inanna.

Babylonian and Assyrian Cultures

The Babylonians displaced the Sumerians as the dominant civilization in southern Mesopotamia about 1900 B.C.E. yet adopted many aspects of Sumerian culture. Like the Sumerians, they spoke the Akkadian language and used the **cuneiform** script. They continued to use the Sumerian calendar and, with the exception of their chief god, Marduk, worshipped traditional Sumerian deities. Even the houses remained in the basic Sumerian style. For most Mesopotamians, daily life under Babylonian rule differed little from life under that of Sumer. Babylonian women enjoyed more freedom than their Sumerian counterparts, but both cultures were strongly patriarchal.

Around 1300 B.C.E., the Babylonians fell to the Assyrians, a closely related people from northern Mesopotamia. The Assyrians also worshipped Sumerian deities and spoke Akkadian. However, unlike the Babylonians, they did not actively promote Sumerian religion or culture among conquered peoples. The Assyrians adopted Aramaic as a common language for their empire, even though the ruling elite continued to speak Akkadian. Subject peoples were allowed to worship local gods, but were also required to acknowledge the existence of a single supreme god, represented on earth by the Assyrian king.

When Babylon finally regained control of the region from Assyria in the seventh century B.C.E., it again attempted to impose the ancient Mesopotamian beliefs and practices on its subjects. After conquering the kingdom of Judah in 586 B.C.E., the Babylonian king Nebuchadrezzar II (r. 604–562 B.C.E.) dispersed its Jewish inhabitants throughout his empire because they refused to worship Babylonian gods. The so-called Babylonian Exile ended (ca. 538 B.C.E.) only after Persia's conquest of the Babylonian Empire in ca. 539 B.C.E. The last Babylonian king, Nabonidus (r. 556–539 B.C.E.), acknowledged the cultural continuity between his empire and Assyria, referring to the Assyrian kings Esarhaddon (r. ca. 680–669 B.C.E.) and Ashurbanipal (r. ca. 669–627 B.C.E.) as his "royal forefathers."

CULTURES OF TOLERATION

The Achaemenid dynasty of Persian kings that conquered Babylonia held significantly different cultural and religious beliefs than did the earlier civilizations of Mesopotamia. The Zoroastrian faith practiced in Persia was based on a cosmic struggle between good and evil, not on the actions of deities associated with the forces of nature. It preached the equality of all humans, regardless of race or sex, as well as a respect for all living things. These values stood in stark contrast to Sumerian and Babylonian approaches to social relations.

Unlike the Babylonians, the Persians did not try to impose their culture on subject peoples. This decision was not only a reflection of their Zoroastrian beliefs, but also a shrewd political calculation. The Persians reasoned that maintaining order over a large and diverse empire would be much easier if subject populations were allowed to practice their own cultures. Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), who toppled the Persian Empire in 330 B.C.E., followed a similar approach that was continued by his successors for the next three centuries.

Alexander introduced to Southwest Asia the **Hellenistic** culture of ancient Greece, which was based on a respect for rational thought and the advancement of human knowledge. Hellenistic society was open to new information, wisdom, and practical experience from foreign cultures. It was also willing to adapt local customs and practices to Greek forms and expressions. It was less accepting of gender equality, however, subjecting females to many of the restrictions experienced by Babylonian women.

By the second century B.C.E., the Romans were beginning to introduce their own variation on Greek

LINK IN TIME

Divination and Prophets

The ancient Mesopotamians believed that they could interpret the will of the gods and, by acting on that knowledge, could please the gods. One method of doing this was to observe the movement of heavenly bodies such as stars and planets, which were considered portents of supernatural and divine events. The Mesopotamians believed that the arrangement of these bodies had a particular meaning that priests could divine. Unusual heavenly occurrences were considered a sign that significant events were about to unfold on earth. These beliefs formed the basis of the practice of astrology. Other methods of divination included examination of bones or the entrails of certain animals, or studying unusual natural phenomena to uncover patterns that would reveal the future.

In the **monotheistic** faiths such as Judaism, Christianity, and Islam, prophets played a role different from that of diviners and astrologers. These faiths portrayed prophets as wise individuals sent by God in times of crisis to help their people see the will of God and act accordingly. Many of the Hebrew prophets, such as Isaiah, also served as political leaders and were among the most significant historical figures in Judaism. Perhaps the most important Christian prophet was John the Baptist (6 B.C.E.–C.E. 32), who is said to have announced the coming of Jesus as the messiah, or promised savior of the Jewish people. In Islam, Muhammad was believed to be the last of 25 prophets sent by God to communicate his will to humans, and Muhammad's predecessors included both Jewish prophets and Jesus of Nazareth.

culture to Southwest Asia. The Roman Republic that initiated the conquest of the region was based on the concept of equal treatment under the law for all citizens. Subject peoples who willingly accepted Roman rule were offered citizenship, regardless of race or ethnicity—even if they had previously fought against Rome. Like the Persians, Rome's leaders respected the cultural traditions of their subjects, allowing them to practice local customs and religions as long as the Roman gods were honored as well.

Not all the people of the region, however, were willing to accept even this compromise with Roman culture. The refusal of many Jews to sacrifice to Roman gods led to a series of Jewish rebellions against Roman rule during the first and second centuries C.E. The Romans eventually destroyed the city of Jerusalem in C.E. 136 and expelled the Jews from much of the province of Judaea (modern-day Israel and Lebanon), setting off a widespread dispersal of Jewry known as the **Diaspora**.

Over the following two centuries, Roman culture in Asia merged more closely with local cultures. By the time the Roman Empire split into eastern and western halves in the late third century C.E., the eastern portion centered in Asia Minor had developed a distinctive blend of Roman, Greek, and Asian influences known as Byzantine culture that made it quite different from western Roman society.

See also: Archeological Discoveries; Art and Architecture; Babylonia; Mesopotamia; Persia; Religion; Scythians; Society; Sumer; Zoroastrianism.

FURTHER READING

Bottero, Jean. "The Cuisine of Ancient Mesopotamia." *Biblical Archaeologist* (March 1985): pp. 36–47.

Conteneau, George. *Everyday Life in Babylonia and Assyria*. New York: Norton, 1966.

Green, Peter, ed. *Hellenistic History and Culture*. Berkeley: University of California Press, 1996.

Kramer, Samuel Noah. *The Sumerians: Their History, Culture, and Character*. Chicago: University of Chicago Press, 1971.

Oppenheim, Leo. *Letters from Mesopotamia*. Chicago: University of Chicago Press, 1987.
Rochberg, Francesca. *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge, MA: Cambridge University Press, 2004.
Van Der Toon, Karel. *From Her Cradle to Her Grave*. Sheffield, UK: Sheffield Academic Press, 1994.
Zeinert, Karen. *The Persian Empire*. Tarrytown, NY: Benchmark Books, 1996.

Cuneiform *See* Language and Writing.

Darius I, the Great (549–486 B.C.E.)

King who expanded the Persian Empire to its greatest extent and who was noted for his stable and even-handed leadership and highly efficient government. Born into the ruling Achaemenid Dynasty, Darius was a distant cousin of the Persian king Cambyses III (r. ca. 530–522 B.C.E.), who was assassinated by a usurper named Smerdis. Seven months later, Darius led an uprising against Smerdis, deposed him, and took the throne for himself.

The land over which Darius ruled from 522 to 486 B.C.E. extended from the eastern shores of the Mediterranean Sea east to India, north to the Black Sea, and south to Egypt and the Persian Gulf. The region was unstable and Darius faced challenges from the *satraps*, or governors of Persian provinces, as well as from the Babylonians, who, having been subjugated by Persian king Cyrus II in 539 B.C.E., were seeking independence from Persia. Within four months, Darius defeated the Babylonians and subdued the rebellious satraps. He then proceeded to push Persia's territories east to the Indus River and west to Macedonia, in what is now Greece.

Darius, however, was concerned with more than merely conquering territory. He spent his reign reforming the government and introducing a common system of laws, much like that of the Babylonian king Hammurabi (r. 1792–1750 B.C.E.). He increased the number of *satrapies* to 20, thus decreasing the influence of individual governors. He also appointed military governors, tax collectors, and royal inspectors to identify and stamp out government abuse and corruption.

Darius undertook reforms and sponsored civic improvements that promoted commerce and stability. These efforts included creating a currency backed by gold in the imperial treasury, progress that caused merchants and buyers to have greater faith in the marketplace and spurred economic activity. Darius built a road system from the Aegean Sea to the Persian Gulf, which not only facilitated trade but also allowed royal couriers to distribute news and orders faster, and permitted the rapid movement of armies throughout the empire. He also built a great canal joining the Red Sea to the Nile River that enabled ships to move goods more efficiently from one end of the empire to the other.

Darius ruled with a fair but heavy hand. Although a devoted believer in Zoroastrianism, he showed tolerance for other faiths. He allowed the Jews to return to Judah after they had been dispersed throughout the region during the reign of the Neo-Babylonian king Nebuchadrezzar II (r. 604–562 B.C.E.). Darius treated all subjects fairly, taxing them the same as he did the Persians. However, he tolerated no resistance, and defeated rebels

Seen here is the entrance to the tomb of Darius I, the Great, emperor of Persia from 522 to 486 B.C.E. Under Darius' rule, the Persian Empire grew to its greatest extent, stretching from what is now Iran and western Pakistan to Anatolia (modern Turkey) and the Mediterranean coast. (© SEF/Art Resource, NY)

were treated harshly. The leaders were killed, the boys castrated, the girls forced into servitude, the remaining population sold into slavery, and the rebel towns burnt to the ground.

Darius' greatest contribution to the ancient world was providing a model of effective rulership over a large and a diverse empire while creating a politically stable and responsible government. His tolerance and style of governance were models for later conquerors including, ironically, the Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), who would eventually topple the Persian Empire.

See also: Indus River; Persia; Technology and Inventions; Zoroastrianism.

FURTHER READING

Abbott, Jacob. *Darius the Great: Ancient Ruler of the Persian Empire*. Long Beach, CA: Lost Arts Media, 2003.

Wilber, Donald Newton. *Persepolis: The Archaeology of Parsa, Seat of the Persian Kings*. Princeton, NJ: Darwin Press, 1989.

Zeinert, Karen. *The Persian Empire*. Tarrytown, NY: Benchmark Books, 1996.

Ebla

City in northern Syria that exerted a dominant political, economic, and military presence in the ancient Near East during the second and third millennia B.C.E. Ebla experienced two periods of supremacy (ca. 2400–2250 B.C.E. and 1850–1650 B.C.E.) but also faced and fell to external threats from neighboring peoples. At its height, Ebla controlled 17 **city-states** throughout the region and traded with peoples from as far away as Egypt and Sumer.

The history of Ebla is documented in thousands of tablets found during **excavations** at the site in the mid-1960s. The tablets are written in **cuneiform**, a script consisting of **pictographs**—symbols that represent ideas rather than sounds. These tablets included an accounting of state revenues, law cases, diplomatic messages, school texts, and trade records. Some of the tablets were written in Sumerian; others were written in a **Semitic** language similar to Hebrew, known as Eblaite.

The **archeologists** from the University of Rome who excavated Ebla revealed that the city was built on a limestone outcropping and defended by thick surrounding walls and four entry gates. Inside the large "lower city" was a raised citadel, or acropolis, that contained palaces, temples, and other administrative buildings. Archeologists estimate that, at its height, Ebla was home to tens of thousands of people. The land surrounding the city was rich with grains, olives, fruits, and vegetables, as well as good pastureland for livestock.

Ebla was a center of trade in the ancient Near East; its exports included timber and **textiles**. The cuneiform tablets found at the site provide evidence of trade relationships with peoples from as far away as Mesopotamia and Egypt. In addition to exporting and importing products, Ebla was a hub of commercial activity through which goods to and from Persia and Anatolia (modern-day Turkey) were transported.

In the third millennium B.C.E., Ebla rivaled the kingdom of Akkad in Mesopotamia as a major world power. However, around 2250 B.C.E., Naram-Sin, an Akkadian king from Mesopotamia, took credit for being the first to destroy Ebla. This event is documented in an **inscription** found at the city site. Ebla struggled to recover from this defeat and, from 1850 to 1650 B.C.E., the city again was a significant power in the region. During this second high point in Ebla's history, the city's inhabitants were known as Amorites.

Between 1650 and 1600 B.C.E., the Hittites, a people from Anatolia, destroyed Ebla. After the Hittite attack, Ebla dwindled to become a small village that eventually ceased to exist around the twelfth century C.E. The city was abandoned, and nothing remained of it except a mound of sand in the desert, until it was excavated in the twentieth century C.E.

See also: Babylonia; Hittites; Mesopotamia; Sumer.

FURTHER READING

Bermant, Chaim. *Ebla: A Revelation in Archaeology*. New York: Time Books, 1979.

Pettinato, Giovanni. *The Archives of Ebla: An Empire Inscribed in Clay*. Garden City, NY: Doubleday, 1981.

———. *Ebla: A New Look at History*. Baltimore: Johns Hopkins University Press, 1991.

Euphrates River

See Fertile Crescent; Mesopotamia.

Fertile Crescent

Crescent-shaped area of land between the Mediterranean Sea and the Persian Gulf, covering the areas of modern-day Iraq, Syria, Lebanon, Jordan, Egypt, and Israel, and including the Euphrates, Tigris, Nile, and Jordan rivers. The availability of water in the region made possible the development of agriculture, which in turn led to the rise of the world's earliest urban settlements.

The geography and natural resources of the Fertile Crescent provided ideal conditions for the development of human civilization. Unlike neighboring regions in the Arabian Peninsula and Central Asia, there were no significant areas of desert to hinder food production and to provide easy invasion routes

for hostile neighbors. Instead, the region was bordered by mountain ranges that made invasion initially difficult and allowed for the relatively safe growth of human settlements. The annual melting snow packs found in the mountains also served as sources for the largest rivers, whose flooding provided plants with not only life-giving water but also soil rich in nutrients. Among these plants, the most important were the eight founder crops involved in early agriculture: emmer and eckhorn (forms of wheat), barley, flax, chickpeas, peas, bitter vetch, and lentils.

The presence of these foods encouraged hunter-gatherers to settle in the Fertile Crescent around 9000 B.C.E. By about 7000 B.C.E., humans had begun to domesticate many of these plant species and learned agricultural techniques that allowed them to feed the rapidly growing populations. These techniques made farming more efficient, requiring fewer people to grow crops. This freed parts of the population to develop specialized skills such as pottery, weaving, engineering, and astronomy.

Larger populations also led to the rise of a separate ruling class to make and enforce the laws needed to regulate social activity in a more complex, urban environment. A religious elite, which often included the king and other high political officials, emerged at this time as well. This course of development characterized the earliest civilizations in the Fertile Crescent, including the Sumerians, Babylonians, Assyrians, and Phoenicians.

Agriculture was not the only early technology to arise in the Fertile Crescent. In addition to farming, the people of the region developed the wheel in the fifth millennium B.C.E., both for pottery production and transportation. Around 3500 B.C.E., metalworking developed in the region, and by 1600 B.C.E. the first iron tools and implements were created here. The complex commercial transactions brought about by the transformation to an urban society required some form of recordkeeping, which led to the creation of the earliest writing systems. The need to measure and divide land for planting and building spurred the invention of mathematics and engineering in the Fertile Crescent, just as it did in ancient Egypt at about the same time. Close observation of the heavens for religious purposes, as well as to time the planting and harvesting of crops, laid the foundations of astronomy. This great explosion of innovation and creativity also earned the Fertile Crescent a reputation as the cradle of human civilization.

See also: Agriculture; Assyria; Babylonia; Language and Writing; Mesopotamia; Persia; Phoenicians; Sumer.

FURTHER READING

Malam, John. *Mesopotamia and the Fertile Crescent: 10,000 to 539 B.C.* Austin, TX: Raintree Steck-Vaughn, 1999.

Hammurabi (d. 1750)

Sixth king of the Amorite dynasty in Babylon, the southern region of Mesopotamia between the Tigris and Euphrates rivers. Under Hammurabi's leadership, Babylon became the leading city in Mesopotamia and achieved its cultural and political zenith.

During the first three decades of Hammurabi's reign (r. 1792–1750 B.C.E), Babylonia maintained relatively peaceful relations with its neighbors. In his thirtieth year on the throne, Hammurabi repelled an invasion by an eastern people known as the Elamites, then conquered the cities of Sumer and Akkad, incorporating them and the surrounding areas into the Old Babylonian Empire (ca. 2000–1595 B.C.E.). Under Hammurabi, Babylonian control extended from the Mediterranean Sea to what is now western Iran, and from southern Anatolia (modern-day Turkey) to northern Arabia.

Dating to the early eighteenth century B.C.E., the Code of Hammurabi is considered the world's earliest written law code that survives today. The imposing black basalt stele, on which the code can be seen, was unearthed at the site of the ancient Persian city of Susa (in modern Iran). It would have been displayed in public to demonstrate the permanence of the written law. (Erich Lessing/Art Resource, NY)

Hammurabi is most famous for a unified law code he enacted that applied equally to all groups under his authority. Hammurabi's code was based on the principle of "an eye for an eye" meaning that whatever harm was done to the victim of the crime would be done to the person who harmed them. The 282 laws recorded in **cuneiform** governed all aspects of public and private life in the Babylonian Empire. They provided protection to women and

children, who had no legal standing, and to the elderly, who were among the most vulnerable members of society. The law ensured that professionals took their responsibility to their clients seriously. For example, if a poorly built structure collapsed and killed someone, the builder would be put in a similar structure that was then pulled down, killing him. Thieves had their right hands cut off.

Penalties outlined in Hammurabi's code were based on the social class of the victim and of the offender. If someone from a lower social class harmed someone of a higher class, the penalty was death. If the victim and offender were of the same class, then the same harm done to the victim would be done to the perpetrator. If someone of a higher social class harmed someone of a lower social class, a fine was assessed.

While based on earlier Mesopotamian laws, the importance of the Code of Hammurabi was that it was recorded and displayed in public. Although few Babylonians were literate, the idea of law being literally carved into stone and unchangeable by a willful ruler was a monumental step forward. The code had a clear influence on modern concept of law: permanent, applied consistently, and not subject to change at the whim of the ruler.

See also: Babylonia; Society.

FURTHER READING

Bryant, Tamera. *The Life and Times of Hammurabi*. Hockessin, DE: Mitchell Lane, 2005.

King, L.W. *The Code of Hammurabi*. New York: Kessinger, 2004.

Van de Mieroop, Marc. *King Hammurabi of Babylon: A Biography*. Malden, MA: Blackwell, 2005.

Harappa and Mohenjo-Daro

The earliest cities in the ancient Indus River valley, in present-day northeast Pakistan, dating from about 3300 to 1600 B.C.E. These cities, along with almost a hundred other settlements located along the course of the Indus River and neighboring rivers, formed the Indus Valley civilization.

Charles Masson, a deserter from the British army, rediscovered the ruins of Harappa in the 1820s. British **archeologist** Sir Alexander Cunningham first formally excavated the site in 1870. Cunningham named the site Harappa after a nearby modern town with that name. A team of Indian archeologists found and excavated the remains of Mohenjo-Daro in the 1920s. Mohenjo-Daro means "Mound of the Dead" in the Sindhi language spoken in the region now.

Harappa, the older of the two settlements, was inhabited from about 3300 to 1600 B.C.E. Mohenjo-Daro, 400 miles (640 km) southwest of Harappa, was occupied about 3000 to 1700 B.C.E. The introduction of irrigation to the Indus River valley around 2600 B.C.E. allowed these settlements to develop into major cities. Scholars estimate that Mohenjo-Daro and Harappa each supported a peak population of 35,000 to 40,000.

CITY PLANNING

These two cities are most notable for the level of civic planning that went into them. They were divided into several sections: the citadel, middle town, and lower town. The citadel was an area enclosed by fortified walls, meant to be a place of refuge both in war and when the Indus River flooded over its banks.

Harappa and Mohenjo-Daro were the first cities in ancient Southwest Asia built on a grid pattern with broad, straight streets. They featured sewage systems that allowed human waste and run-off water to be carried out of the cities through drainage ditches. Water was reused and waste was

TURNING POINT

First Planned Cities

The first cities in southwest Asia did not just evolve randomly from the growth of smaller villages and towns into large urban centers—they show evidence of careful planning and organization in response to dangers presented by nature and invaders. At Harappa and Mohenjo-Daro, one of the most striking features of each city's layout is how the streets form a grid of square and rectangular blocks.

The violent flooding of the Indus River and its periodic destruction of these cities contributed to the necessity for planning. Each time the cities had to be rebuilt, they were reconstructed exactly as they had been laid out before. In addition to the city blocks, these communities also planned very sophisticated drainage and sewer systems so that their cities would remain as clean as possible, and by healthy places to live. Every home had a latrine and a bathing area, and the run-off from these areas of each home was carefully managed. Water was reused and waste was moved through the sewer into the Indus.

Another important aspect of city planning was location. Not only did the Indus make trade by water cheap, both Harappa and Mohenjo-Daro lie at the crossroads of major trade routes. This strategic location of the cities contributed to their growth as centers of trade in the region. By situating themselves so well, the inhabitants of the cities also ensured their economic prosperity and future security. City walls with gates installed at intervals allowed the city to control the traffic of trade and enforce systems of weights and measures uniformly.

There was consistency throughout the city, not only in how the streets were laid out and built, but that each neighborhood had a conveniently located well for fresh water. This attention to detail reveals that having an ordered and organized city was important. It could help create a sense of solidarity and community, and it certainly made living in a metropolis easier and more pleasant. The benefit of planning is clear. These cities had a much longer period of existence under one authority than Mesopotamian cities, such as Ur and Jerusalem, which were continually conquered and lost their importance in the ancient world.

moved through the sewer into the Indus. The elaborate city planning, and the existence of sewer and irrigation systems, suggested highly effective government organization and control. The precise nature and structure of city government, however, remains unknown.

Inhabitants of the cities lived in both private homes and structures that accommodated several families. Private homes had inner courtyards to provide fresh air for ventilation and to isolate the living areas from street noise and dust. From the number of private homes, it is thought there must have been a large middle class that had some role in the government of each city. All buildings were made out of mud bricks baked in kilns or dried in the sun. Wells supplied the neighborhoods with fresh drinking water.

SOCIETY

Another important aspect of city planning in these cities was location. Both Harappa and Mohenjo-Daro lie at the crossroads of major trade routes, and both were actively involved in trade with northern and central India, the coastal areas of ancient Persia, and Mesopotamia. Trade goods produced in the cities included beads made from shell and other materials, decorated pottery, tools, and dyed cotton cloth. City walls with gates installed at intervals allowed the city to control the traffic of trade and enforce systems of weights and measures uniformly.

As an outgrowth of trade, Harappans developed an accurate system of weights and measures and a writing system known as the Indus script. Nearly 2,000 clay tablets have been found at the two sites

Unearthed in modern Pakistan, the ancient city of Mohenjo-Daro, along with its sister city, Harappa, was the center of the first settled civilization in the Indus River valley. These cities boasted some of the earliest evidence of civic planning and featured extensive irrigation systems to supply water to their rapidly growing populations. (Borromeo/Art Resource, NY)

containing short **inscriptions** in this script, varying between five and 26 symbols. Although some scholars believe the tablets may have been used to record business transactions, the writings have not yet been translated.

The religious beliefs of the inhabitants of these cities is also unclear. To date, nothing that can be described as a temple or religious center has been uncovered. One of the most famous finds at Mohenjo-Daro is a four-inch-tall (2.5-cm) cast bronze figurine of a dancing female. It is not known if it had a religious meaning or use. Other female figurines with elaborate hairstyles have been found but their significance has yet to be discovered.

DESTRUCTION AND DECLINE

During the course of their existence, Harappa and Mohenjo-Daro repeatedly were damaged or destroyed by flooding of the Indus River. However, after each inundation the inhabitants rebuilt on top of the ruins of the old city. Archeologists have found seven distinct levels of this kind of rebuilding at Mohenjo-Daro. At Harappa at least five such levels have been unearthed so far. Each time the cities were rebuilt, they were reconstructed exactly as they had been laid out before. To facilitate rebuilding, the streets were laid out in a regular grid of rectangular and square blocks.

Several theories have been advanced to explain the decline and disappearance of these two cities. The most widely accepted states that a natural disaster so damaged Harappa and Mohenjo-Daro that the residents saw no point in rebuilding and resettling there. Scholars debate the nature of that disaster. Some suggest that a severe flood may have inundated each city. Others believe that the Indus River permanently changed course, either away

from the cities or through them. A third theory proposes that a long-term drought forced the inhabitants to move elsewhere. The fourth argues that the cities were destroyed by an earthquake sometime between 1900 and 1750 B.C.E. Mohenjo-Daro was abandoned by approximately 1700 B.C.E.; the final residents left Harappa perhaps 100 years later.

See also: Indus River; Sumer.

FURTHER READING

Kenoyer, Jonathan M. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.

Ratnagar, Shereen. *Understanding Harappa: Civilization in the Greater Indus Valley*. New Delhi, India: Tulika Press, 2002.

Hittites

Indo-European people from central Anatolia (modern-day Turkey) who controlled Asia Minor from the eighteenth to the twelfth centuries B.C.E. Hittite history falls into three major **periods**: the Old Hittite Kingdom (ca. 1700–1500 B.C.E.), the Middle Hittite Kingdom (ca. 1500–1430 B.C.E.), and the New Hittite Kingdom or Empire (ca. 1430–1180 B.C.E.).

The first Hittite king whose name appears in the historical record is Hattusilis I (r. ca. 1650–ca. 1620 B.C.E.) who expanded his realm into Syria and conquered Babylon, ending the rule of the descendants of the famed king Hammurabi (r. 1792–1750 B.C.E). Success was short-lived, however, and by 1595 B.C.E., struggles within the ruling family weakened Hittite authority over their vast domains. Some 70 years later, Telipinus (r. ca. 1525–ca. 1500 B.C.E.) assumed the throne and restored order. A proclamation issued by Telipinus is one of the few documents still existing from this period of Hittite history. Beginning in 1430 B.C.E., a series of kings extended the empire to the eastern shore of the Mediterranean Sea and south to the Egyptian border.

The Hittites were known for the making and selling of iron tools and weapons, which formed a vital part of their economy. The trade in metal goods brought the Hittites into contact with a wide variety of people from whom they borrowed elements of other people's cultures. For example, although they spoke a native tongue, tablets uncovered at Bogazkoy in modern-day Turkey in 1905 revealed that the Hittites wrote in Akkadian **cuneiform**. The Hittites adopted much of Babylonian culture, including King Hammurabi's Code of Law, as well as the idea of a king who was both warrior and high priest. They accepted the Babylonian gods but, unlike the Babylonians, were tolerant of other faiths. The Hittites allowed their subjects to worship the gods of their own choosing, and conquered peoples were allowed to keep their own cultural practices and languages.

Control over trade routes and sources of metal ores eventually led to conflict between Hittite and Egyptian rulers. In 1274 B.C.E., Egyptian forces under Rameses II, the Great (r. ca. 1279–ca. 1213 B.C.E.), met the Hittite army of Muwatallis (1320–1294 B.C.E.) in the largest chariot battle to date at Kadesh on the Orontes River, in modern-day Syria. The result was a draw, but the cost of the wars and the loss of manpower weakened both sides significantly. The Hittite Empire was left vulnerable by the Egyptian campaign and by struggles for the throne within the ruling family. In 1193 B.C.E., a groups of invaders known as the Sea Peoples attacked a militarily overextended and financially exhausted Hittite Empire. By 1180 B.C.E., the empire had ceased to exist, but small, independent

kingdoms built on the ruins of the empire continued until about 700 B.C.E.

See also: Assyria; Babylonia; Tools and Weapons.

FURTHER READING

Bryce, Trevor. *The Kingdom of the Hittites*. Oxford: Oxford University Press, 2006.

———. *Life and Society in the Hittite World*. Oxford: Oxford University Press, 2004.

Hoffner, Harry A., Jr. *Hittite Myths*. Atlanta: Scholars Press, 1998.

———. *The Laws of the Hittites*. New York: Brill, 1997.

I

Indus River

Major river of Southwest Asia that served as the cradle of one of the world's earliest and largest civilizations. The name "Indus" is derived from the Sanskrit word *sindhu*, which means "large body of water." The peoples who lived in the Indus Valley came to be known as "Hindus," based on a Persian mispronunciation of the Sanskrit word. The river also gave its name to the land of India.

The Indus flows south from the Himalayan Mountains in Tibet through present-day India and Pakistan, to the Arabian Sea, a distance of about 2,000 miles (3,200 km). The glacial melt from the Himalaya Mountains feeds the Indus River, which provides a significant water source for the plains and otherwise arid lands surrounding it. This allowed farming to thrive in the region and more than 1,000 settlements, villages, and cities to be established along its banks. Irrigation was introduced about 2600 B.C.E. and later expanded under the Kushan Empire (ca. C.E. 1–250) and Mughal Empire (C.E. 1526–1707).

Although the river made civilization possible in the Indus Valley, it could also be destructive. The Indus experiences a rare geographical event called a tidal bore, which is a surge of water from the ocean traveling up the river, against the normal flow of the current. The tidal bore is basically a tidal wave that causes the levels of water to rise and fall dramatically. In addition, during the monsoon season between July and September, so much rain falls that the Indus River floods, causing widespread damage to fields and housing, and often resulting in large loss of life. This flooding is so severe that two major cities of the ancient Indus Valley civilization, Harappa and Mohenjo-Daro, had to be rebuilt several times.

The Indus River also functioned as a culturally unifying force. The flow of the Indus through the northern Indian region helped to promote communication and cultural exchange among the diverse groups living along its course. In contrast, southern Indian populations lived in isolated hillside and mountain communities, not united by a common river system, a situation that encouraged greater cultural diversity and mistrust of outsiders. Politically and militarily, the Indus River served as a natural boundary between the regions of ancient India and those territories now known as Afghanistan and Iran. This offered the inhabitants of the Indus Valley some protection from invaders from those regions. However, since the river flowed south into the Arabian Sea, it facilitated invasion from the south and west. For example, in 326 B.C.E., the Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), rafted his army up the river to attack Indian cities.

See also: Harappa and Mohenjo-Daro; Monsoons.

FURTHER READING

Bowden, Rob. *Settlements of the Indus River*. Portsmouth, NH: Heinemann Educational Books, 2004.
Cunningham, Alexander. *The Ancient Geography of India*. Varanasi, India: Indological Book House, 1979.
Kenoyer, Jonathan M. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.

Irrigation

See Agriculture; Technology and Inventions.

Islam

Monotheistic religion founded by the prophet Muhammad (C.E. 570–632) between C.E. 610 and 613 in what is now Saudi Arabia. The Arabic word *islam* means "submission," referring to adherents' surrender to the will of God. Followers of Islam are called Muslims and their sacred text is the Koran ("the reading"). Muslims believe that the Koran is the word of God as delivered by the archangel Gabriel to Muhammad.

MUHAMMAD

Muhammad was 40 years old when he received his first religious revelation. He began teaching his family and friends the beliefs that were revealed to him, and in time many in Mecca converted to Islam and turned to Muhammad as both a political and religious leader. This brought him into conflict with the leaders of Mecca, who turned increasingly violent against him. In C.E. 622, Muhammad and his followers moved to Yathrib, approximately 200 miles (320 km) northeast of Mecca. This move, called the Hejira, is the starting date for the Islamic calendar.

The community of Yathrib subsequently converted to Islam and took the name Medina ("city of the prophet"). By C.E. 630, Muhammad was the religious, political, and military leader of Medina, Mecca, and the area in between. After his death in C.E. 632, his political and military roles were taken on by his best friend and father-in-law, Abu Bakr (r. C.E. 632–634). By this time, the entire Arabian Peninsula was under Islamic rule.

ISLAMIC BELIEFS

As Muhammad had taught his earliest followers, Muslims worship a single all-powerful God named Allah who they believe created the world. They believe that messengers or prophets throughout history have delivered the word of God to humankind. The prophets of Islam include many of the Hebrew **patriarchs**, such as Abraham (the legendary ancestor of both Jews and Arabs and to whom the Islam religion traces its roots) and Moses (thought of as the founder of Judaism), as well as Jesus of Nazareth. Muslims claim that the line of prophets ended with Muhammad, whom they consider the greatest of all the prophets.

The basic tenets of the Muslim faith are contained in the Koran, whose verses, according to legend, Muhammad recited to scribes while in a religious trance. The main religious duties of a devout Muslim are called the Five Pillars of Islam. The first pillar is recitation of the affirmation of faith, or *shahadah*: "There is no god but God (Allah) and Muhammad is the messenger of God." The second pillar is engaging in prayer five times each day, with a special sixth prayer on Friday. Prayer can be performed individually or in groups. The third pillar is fasting from sunrise to sunset during the month of Ramadan in order to purify the body and redirect one's focus back to god. Muslims may

GREAT LIVES

Muhammad

At the time that Muhammad (C.E. 570–632) received his first spiritual revelation, he was a successful businessman with a wife and five children. Although he had fared well under the Arab tribal leaders who held power in the Arabian Peninsula, he was deeply troubled about the direction of Arab society. The ruling families seemed to govern without a sense of social obligation or desire to create unity. The poor, sick, and old were allowed to suffer alone. Caravan owners raided one another's camel trains. Revenge killings by one family against another for real or perceived crimes lasted for generations. Rather than trying to end such violence, the tribal leaders deliberately created distrust between various social factions to prevent them from uniting and overthrowing the established political order.

It was in this context between C.E. 610 and 613 that Muhammad received the word of God. Muhammad began to speak of his beliefs in public, emphasizing the common humanity of all peoples, Arab and non-Arab. He argued that members of the community should be responsible for looking after one another; that the sick were everyone's responsibility; and that no one should turn away from a beggar. He taught that one's skin color, social class, or gender is unimportant; an individual's devotion to becoming the person Allah intended him or her to be is what truly matters.

In a period of roughly 20 years, Muhammad changed the society in which he lived. During his lifetime, he and his followers created a community in which men, women, former slaves, city-dwellers, and nomads had equal treatment under the law. It was a society in which women could inherit property and husbands could not beat their wives. At a time when Christians were fighting amongst themselves to control petty kingdoms in Europe, Muhammad's life and teachings guided Muslims of different races toward spiritual, social, and cultural unity.

only drink water during the day and may eat only after sunset. During this month, a Muslim must also abstain from harmful actions and speech, as well as sexual relations. The fourth pillar is the giving of alms to the poor. The fifth pillar is the obligation to make a pilgrimage to the sacred site of Mecca at least once during one's lifetime. Other Islamic recommendations and proscriptions are found in *shari'ah*, Islamic law; *sunnah*, customary law; and *haddiths*, verified statements and actions of Muhammad.

SPREAD OF ISLAM

In the century following Muhammad's death, Islam spread rapidly through trade networks, conversion, and military conquest. From the Arabian Peninsula, it spread west into North Africa and across the Strait of Gibraltar into Iberia (modern-day Spain and Portugal). It also expanded northward through the Eastern Mediterranean and eventually as far as Asia Minor (modern-day Turkey) and east to what are now Pakistan and Afghanistan. This first phase of aggressive expansion occurred under the Umayyad Dynasty (C.E. 661–750), descendants of Muhammad, whose capital was in Damascus, in modern-day Syria.

The expansion and conversion of non-Arab populations by the Umayyads antagonized more traditional Arab Muslims. These conservative groups supported a rival faction, the Abbasids, who overthrew the Umayyads in C.E. 750 and established their own dynasty, centered in Baghdad. The sole remaining line of Umayyad rulers continued to wield power in Iberia until C.E. 1492. The Abbasids turned away from territorial expansion and focused on establishing firm control over their domains. Nevertheless, they were unable to stop an invasion by Mongols from Central Asia in the mid-thirteenth century C.E.: they sacked Baghdad and brought an end to the Abbasid Dynasty in C.E. 1258.

RISE OF ISLAM

C.E. 610–613 Muhammad received first revelations and begins preaching Islam in Arabian Peninsula

C.E. 622 Muhammad and followers leave Mecca for the city Yathrib (later Medina); this event, called the *Hejira*, marks the start of the Islamic calendar

C.E. 630 Muhammad returns to Mecca as political and spiritual leader of Islam

C.E. 632 Death of Muhammad; Arabian Peninsula under Islamic rule

C.E. 661–750 Umayyad Dynasty expands territory under Islamic rule from Arabia throughout Southwest Asia and into North Africa, India, and Iberia (modern-day Spain and Portugal)

C.E. 750–1258 Abbasid Dynasty assumes leadership of Islamic Empire

C.E. CA. 1100 Islam spreads to Indonesia

C.E. 1210–1526 Islamic Delhi sultanate rules in India

C.E. 1258 Mongols sack Baghdad, bringing end to Abbasid Dynasty

C.E. 1492 Last Muslims expelled from Spain

C.E. 1526–1707 Islamic Mughal Empire succeeds Delhi Sultanate in India

Whereas Arab armies brought Islam to Africa and the Middle East, Arab Muslim merchants were the primary agents of Islam in India. Indian merchants in the state of Kerala on the Malabar Coast of Southeast India were the first to convert. The first Indian mosque, or religious building, was built in C.E. 642 in Kasargod, Kerala. Islamic rulers eventually came to power in India, most notably the Delhi Sultanate (C.E. 1210–1526) and the Mughal Empire (C.E. 1526–1707). By the twelfth century, Islam spread east from India to what is now Indonesia.

See also: Christianity; Religion.

FURTHER READING

Armstrong, Karen. *Islam: A Short History*. New York: Random House, 2002.

———. *Muhammad: A Biography of the Prophet*. New York: HarperCollins, 1993.

Watt, William Montgomery. *Muhammad: Prophet and Statesman*. Oxford: Oxford University Press, 1961.

Wilkinson, Philip. *Islam*. New York: Dorling Kindersley, 2005.

J

Jerusalem

City in central Israel considered holy by the world's three major **monotheistic** faiths, Judaism, Christianity, and Islam. Originally a Canaanite settlement founded in the second millennium B.C.E., Jerusalem became the capital of the united Kingdom of Israel around 1000 B.C.E. The Hebrew king Solomon (r. ca. 970–ca. 930 B.C.E.) furthered the expansion of the city by encouraging the nomadic tribes of Israel to establish permanent urban residence there. Solomon built administrative and judicial centers in Jerusalem, and constructed the First Temple to house the Ark of the Covenant, a chest that purportedly held the pieces of the Ten Commandments.

After Solomon's death, the Kingdom of Israel split into two states—the Northern Kingdom of Israel with its capital at Shechem, and the Southern Kingdom of Judah, which maintained Jerusalem as its capital. In the eighth century B.C.E., the Babylonians invaded the northern kingdom, gradually conquering pieces of its territory until the last Israeli stronghold fell in 722 B.C.E. The southern Kingdom of Judah fell to the Babylonian king Nebuchadrezzar II (r. 604–562 B.C.E.) in 597 B.C.E. and was destroyed in 586 B.C.E. Local religious and political resistance led the Babylonians to destroy Jerusalem's city walls and Solomon's temple and to deport its leading citizens to elsewhere in the Babylonian Empire. After conquering the Babylonians in 539 B.C.E., King Cyrus II, the Great, of Persia (r. ca. 559–ca. 530 B.C.E.) allowed the Jews to return to Judah. With the end of the so-called Babylonian Exile, a new Second Temple was founded in Jerusalem, which regained its status as the spiritual center of Judaism.

Until the twentieth century C.E., Jerusalem remained in the hands of various foreign conquerors, including the Greeks, the Romans, the Byzantine Empire, and a number of Muslim dynasties. Because the city's Church of the Holy Sepulchre and other shrines are located on what is believed to be the site of the crucifixion of Jesus of Nazareth (ca. 4 B.C.E.–ca. C.E. 30), it is a holy site for Christians and a pilgrimage destination. The Al-Aqsa Mosque on Temple Mount, dating to C.E. 647, was built on the spot where Muslims believe Muhammad ascended to heaven for a single night to talk to Moses and Abraham. Thus, Muslims also consider Jerusalem sacred ground. Its religious importance among the three major faiths has made it a focus of religious warfare. In C.E. 1099, Crusaders from Christian western Europe captured Jerusalem and established a Christian kingdom there. It lasted only until C.E. 1247.

See also: Assyria; Christianity; Islam; Jews and Judaism; Persia; Religion.

FURTHER READING

Armstrong, Karen. *Jerusalem: One City, Three Faiths.* New York: Random House, 1997.

Cline, Eric H. *Jerusalem Besieged: From Ancient Canaan to Modern Israel.* Ann Arbor: University of Michigan Press, 2004.

Zeigler, David. *Israel.* Philadelphia: Chelsea House, 2002.

Jews and Judaism

Name given to a **monotheistic** religion that began in ancient Southwest Asia about 1800 B.C.E., and its adherents. The word *Jew* is derived from the name of the ancient Hebrew Kingdom of Judah, which existed from the tenth to the sixth centuries B.C.E.

According to the Hebrew Bible, scriptures referred to by Christians as the Old Testament, the roots of Judaism lie in the ancient Mesopotamian city of Ur, in what is now Iraq. A citizen of Ur named Abraham is considered the first Jew because he was the first person to submit to the will of the Hebrew god, Yahweh. According to the book of Genesis, Yahweh established a covenant, or agreement, with Abraham which promised that Abraham and his descendents would prosper as long as they kept faith with Yahweh.

At Yahweh's direction, Abraham moved his peo-

GREAT LIVES

Abraham

Abraham (born ca. 1800 B.C.E.) holds a unique place in religious history. He is revered in Judaism, Christianity, and Islam, and is mentioned in the Hebrew Scriptures, the Bible, and the Koran. In the modern world, he is seen as the vital connecting thread among the three major **monotheistic** faiths. Because Abraham's life has deep meaning in these faiths, they are called Abrahamic faiths.

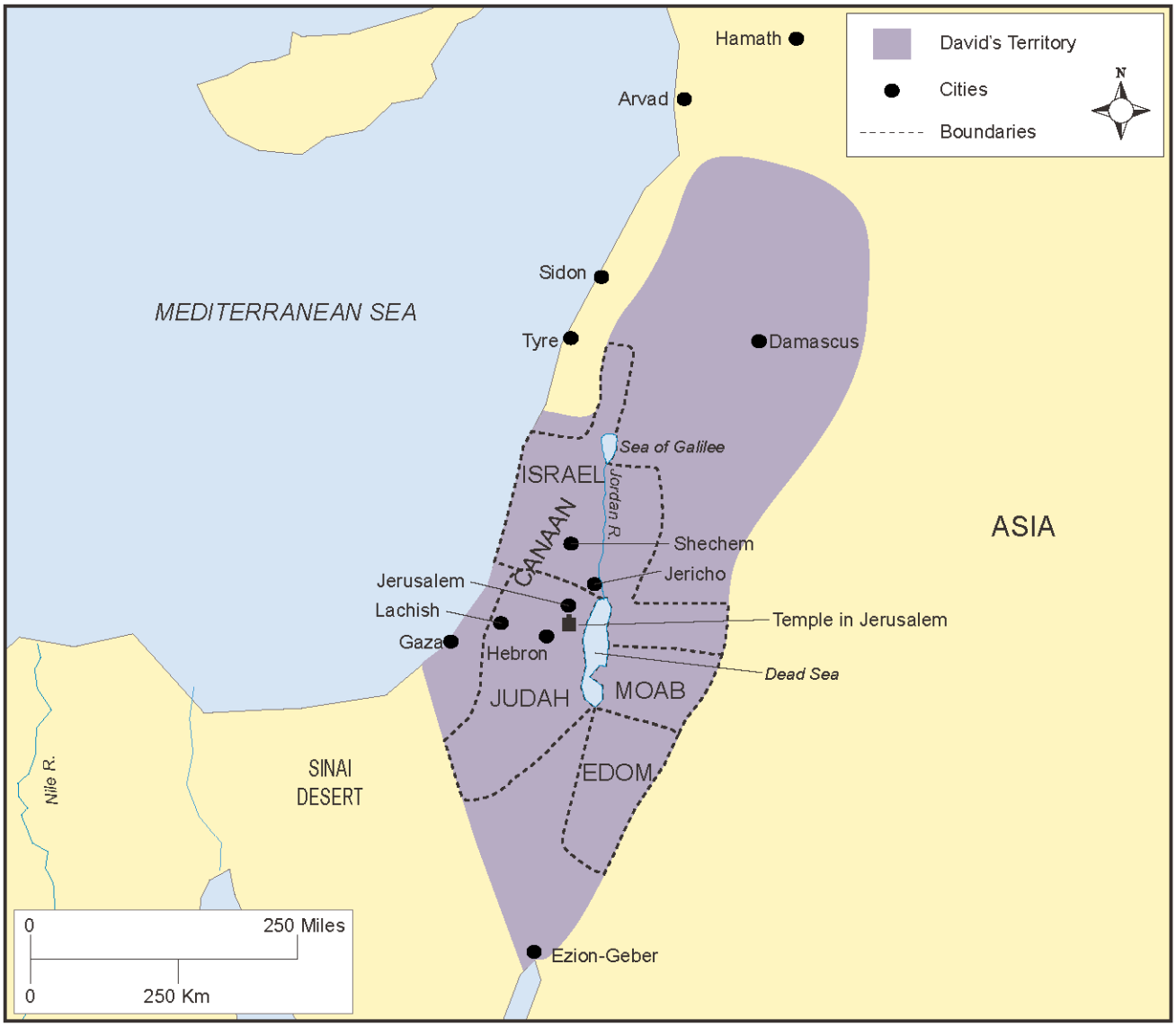
In Judaism, Abraham was the first to believe in the single all-powerful god named Yahweh. His faith in Yahweh led Abraham to abandon his ancestors, beliefs and leave his home to worship his god. As the first to enter into the covenant with Yahweh, Abraham is considered the father of the people who became the Jews. In Jewish tradition, the near sacrifice of his second son, Isaac, was one of 10 tests Abraham underwent to see if he and his descendants were worthy of entering into the covenant.

Christians revere Abraham as the first man to believe in Yahweh, whom they consider one of the three aspects of God, and because he provides a model for the kind of absolute faith later demonstrated by Jesus and his followers. Saint Paul (C.E. ca. 3–ca. 67), a key figure in the early spread of Christianity, often held up Abraham as a model of faith in the absence of evidence. Christians often see Abraham's sacrifice of Isaac as foreshadowing the sacrifice of Jesus on the cross.

In Islam, Abraham, or Ibrahim, was a "god-seeker" or prophet, a person who is sent to deliver god's message to humanity. Abraham is often likened to the prophet Muhammad, who first preached Islam, because both faced the difficult task of introducing a new understanding of God to a disbelieving people. In the Koran, Isaac's brother Ishmael is almost sacrificed to prove Abraham's faith. Because Ismail traditionally is considered the father of the Arabic people, Muslims revere both Ishmael and his father, Abraham.

ISRAEL IN THE TIME OF KING DAVID, CA. 1010–970 B.C.E.

King David, the second king of ancient Judah and Israel, revered by Jews, Christians, and Muslims alike, unified the 12 ancient Israelite tribes to form a powerful territory.



ple to Canaan, a region lying along the eastern shore of the Mediterranean Sea. In the eighteenth century B.C.E., Jews migrated from Canaan into Egypt. The Bible records that the Egyptians eventually turned against and enslaved the Jews. According to the book of Exodus, Yahweh sent a series of plagues upon Egypt that convinced the Egyptian pharaoh to allow the Jews to leave Egypt to seek a land of their own. Historians and **archeologists** debate the accuracy of the biblical account, noting that no evidence of such a large-scale migration appears in either Egyptian histories or the archeological record.

Regardless of the historical accuracy of the account, Jews regard the exodus as a key moment in their history. Led by a lawgiver and prophet named Moses, the Jews are said to have wandered in the Sinai Desert for 40 years in search of a new home.

The Western Wall, one of the holiest sites in Judaism, is comprised of the remains of the Second Jewish Temple, destroyed by the Romans in C.E. 70. The wall stands in modern-day Israel in the city of Jerusalem, which is sacred to the three major monotheistic faiths that originated in Southwest Asia: Judaism, Christianity, and Islam. (Gary Cralle/ The Image Bank/ Getty Images)

While on this journey, Moses is reported to have received from Yahweh the Ten Commandments, which form the basic moral and religious obligations for Jews. Around 1200 B.C.E., the nomadic Jews reentered Canaan. They encountered many smaller groups, but there was no major power in the region to keep the Jews from claiming some of the land.

ANCIENT ISRAEL

The Jews were organized into 12 independent tribes that formed a loose confederation, or military alliance, for mutual protection. Around 1024 B.C.E., the Jews united under the first king of ancient Israel, Saul, who secured the borders of the new kingdom. Saul is said to have been succeeded

TURNING POINT

The Difficulties of Monotheism

Monotheism is the worship of a single god, instead of many different gods. Three monotheistic religions emerged in **antiquity** that changed the spiritual landscape of the world: Judaism, Christianity, and Islam. Although the basic ideas of each faith vary, their followers worship a single, all-powerful god who they believe created the universe. This was a radical shift from the **polytheistic** religions of antiquity in which the gods played many roles.

The shift from polytheism to monotheism was not easy spiritually. People worshiping multiple gods could appeal to several different deities if one failed to respond to prayers or sacrifices. Worshiping a single god meant putting all of one's faith and trust in a single deity. To many, this notion seemed illogical and somewhat frightening. In some cases, fear and misunderstanding led to mistrust and persecution of members of monotheistic faiths.

Jews suffered persecution for their beliefs after being conquered by the Babylonians in 587 B.C.E. The Jewish inhabitants of the Northern Kingdom of Judah, in what is now Israel, refused to honor Babylonian gods and were exiled throughout the Babylonian Empire. The so-called Babylonian Exile ended in ca. 538 B.C.E., after the Persian conquest of Babylonia.

Christians living in the Roman Empire in the first and second centuries C.E. also faced official and unofficial persecution. Unlike the Babylonians, the Romans did not force subject peoples to abandon their own faiths, but they did require their subjects to make annual sacrifices to the Roman state gods. Like the Jews, however, Christians refused to worship other gods. Roman officials, as well as many average citizens, considered this attitude anti-Roman and came to view Christians as a threat to Rome.

by his son-in-law, David (r. ca. 1000–ca. 961 B.C.E.). Although David is one of the best-known figures in the Bible, there is debate as to whether he existed. The biblical David is given credit for expanding the borders of Israel and for building Jerusalem into an important capital. The third Jewish king, Solomon (r. ca. 970–ca. 930 B.C.E.), built the First Temple in Jerusalem and attempted to form the Jews into a unified people by breaking the old bonds of tribal allegiance. This meant breaking the authority of the tribal leaders, who resisted Solomon's polices.

Following Solomon's death, 10 of the tribes broke away and formed the Northern Kingdom of Israel. They rejected a strong centralized government, which left them vulnerable to attack. In the eighth century B.C.E., the Assyrians began a conquest of each of the tribes, and by 722 B.C.E. all of Northern Israel had fallen.

The remaining tribes of Judah and Benjamin, which together formed the southern Kingdom of Judah, held off the Assyrians but were conquered by the Babylonian Empire in 586 B.C.E. When the Jews refused to worship Babylonian gods, the Babylonians destroyed Solomon's temple, burned Jerusalem, and forcibly deported 10,000 prominent Jews to distant parts of the Babylonian Empire. This exile of Jews is known as the Babylonian Diaspora.

In 539 B.C.E., the Persians conquered the Babylonians and the following year they allowed the exiled Jews to return to Judah. The Persians, who were more tolerant than their predecessors, permitted the practice of Judaism and the rebuilding of the Temple in Jerusalem. In 330 B.C.E., the Persian Empire fell to the Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), and Judah became part of the **Hellenistic** world. Alexander's empire crumbled soon after his death, and the Jews came under the control of the Seleucid Empire that subsequently arose in Babylon. In 165 B.C.E., a Jewish group named the Maccabees led a successful revolt against the Seleucids and established an independent Kingdom of Judah. The Jewish holiday of Hanukkah celebrates this victory.

The Roman Empire conquered the Maccabees' kingdom in 63 B.C.E. but had great difficulty maintaining order. Judah's population resisted Roman occupation, staging three large-scale revolts against Roman rule. The last of these resulted in the Roman devastation of Judah in C.E. 135 and the expulsion of large numbers of Jews from the region. This forced a centuries-long dispersal of Jews called the **Diaspora**, sending them to other regions of the Near East and Europe. This dispersal ended only with the establishment of the modern-day state of Israel in C.E. 1948.

LAW AND CUSTOM

The first five books of the Jewish scriptures comprise the Torah, the most sacred of Jewish texts. The Torah lays out Jewish religious law and describes acceptable social and dietary practices. The rest of the Hebrew Bible consists of books of wisdom, history, prophecy, law, and psalms. These writings constitute a history of the Jewish people and explain what God expects from them in terms of moral and ethical behavior. Jewish law is meant to provide moral and ethical guidelines for how to act toward God and toward other humans. It is concerned primarily with human relationships, not with property rights, and states that all humans regardless of sex or race are to be treated with respect, dignity, and equality.

The Jewish ideals of respect and dignity for humankind, monotheism, individual responsibility, and expectations of moral and ethical behavior influenced other religions in ancient Southwest Asia. Other faiths that arose in the region claim kinship with Judaism, preserving many of the same principles and revering many of the same figures. Christianity, for example, began as a sect of Judaism and maintained its concept of the human relationship with God and the individual's responsibility to take morally right actions. Islam is also tightly interwoven with Judaism's early history. Muslims believe that the prophet Muhammad was a direct descendant of Abraham through his son Ishmael, and they too accept Moses as a prophet.

See also: Assyria; Babylonia; Bible; Christianity; Islam; Jerusalem; Religion; Ur.

FURTHER READING

Grant, Michael. *History of Ancient Israel and Judah*. New York: Scribner, 1984.

Matthews, Victor H., and Don C. Benjamin. *The Social World of Ancient Israel*. Peabody, MA: Hendrickson, 1993.

Miller, J. Maxwell, and John Haralson Hayes. *A History of Ancient Israel and Judah*. Philadelphia: Westminster Press, 1986.

Shanks, Hershel. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. 2nd ed. New York: Prentice Hall, 1999.

Vanderkam, James C. *An Introduction to Early Judaism*. Grand Rapids, MI: Eerdmans, 2000.

L

Language and Writing

Southwest Asia was one of two areas—ancient Egypt being the other—in which written language developed independently some time after 3000 B.C.E. Scholars speculate that these early civilizations originally developed writing as a way to record commercial transactions. Eventually, its use spread to include the recording of tax records, political and legal declarations, religious rituals and beliefs, the achievements of rulers, and literature.

SPOKEN LANGUAGES

Ancient spoken languages in the regions of Mesopotamia, Anatolia (modern-day Turkey), and the Indus River Valley are divided into two distinct groups: **Semitic** and Indo-European. The Semitic language group includes Arabic, Hebrew, Aramaic, Akkadian, Babylonian, and Persian (or Farsi). These languages share many similarities in grammar, although they developed different pronunciations and vocabularies because of the physical separation of the various groups that spoke them. Numerous waves of human migration spread Semitic languages from Africa across the Arabian Peninsula between 3000 and 2500 B.C.E.

The Indo-European languages were and are still spoken primarily in Europe, India, and parts of Southwest Asia. They include English, German, Celtic, Hindi, and Indo-Iranian. Many **linguists** and **archeologists** interpret the presence of Indo-European languages in Southwest Asia as a sign of invasion or migration by peoples from the Caucasus and southern Russia into the Indus River valley. This wave of migration occurred sometime around 3000 B.C.E., and later spread into the areas of modern-day Iran and Afghanistan.

WRITING SYSTEMS

Around 3100 B.C.E., the Sumerians developed the **cuneiform** script, a form of writing that used **pictographs**, symbols that stood for individual things or ideas. Early cuneiform employed ideograms, symbols that looked like the items they represented. Over time, the symbols became more abstract and looked increasingly less like the things they represented. Cuneiform was a difficult writing system to learn because mastering it required a working knowledge of between 500 and 1,000 symbols.

To record the symbols, Sumerians pressed a thin wooden stick with a slanted end into a wet clay tablet. The tablet was then dried either in the sun or in a kiln, or oven. Clay was used because it was plentiful along the banks of the Tigris and Euphrates rivers. The tablets, which came in a variety of shapes, including cones or rectangular sheets of clay, bore lines to separate the rows of writing. Corrections could be made to the tablets while still

This clay tablet from Achaemenid Persia contains cuneiform writing from about 500 B.C.E. Tablets such as these were used to record administrative details of the Persian government, such as the daily rations distributed to workers, which provide scholars with original sources of information about the workings of the Persian Empire. (Behrouz Mehri/AFP/Getty Images)

wet, but it was not possible to alter texts once the clay had hardened.

Because it took time to learn to read and write, literacy was a skill developed by only a tiny fraction of early Mesopotamians. The sons of wealthy families, who were destined to enter government service or become priests, were most likely to learn cuneiform. A small number of commoners became independent scribes, writing contracts for merchants and farmers and recording the decrees of the ruling and priestly classes.

Documents and **inscriptions** excavated from ancient sites in Mesopotamia illustrate some of the non-commercial reasons for the development of writing. For example, putting laws in written form gave concrete expression to the rights and obligations of subjects as well as of their rulers. A written law code made it more difficult for rulers to act in an arbitrary fashion. It also specified the extent of a ruler's power as the gods' representative on earth, and specified the range of rulers' authority over their subjects. The oldest surviving fragments of law codes come from the reign of Ur-Nammu, King of Ur (r. ca. 2065–ca. 2047 B.C.E.). This code was highly evolved and clearly based on older law codes that are now considered lost. The oldest complete law code is the Code of Hammurabi, complied around 1786 B.C.E.

Writing also allowed rulers to preserve their names and achievements to gain a sort of immortality through the historical record. The best example of writing to proclaim a ruler's greatness was found in what is now Iraq. It is called the *Behistun Inscription* and dates to about 515 B.C.E. The Persian king Darius I (r. 522–486 B.C.E.) ordered it to be inscribed

LINK IN TIME

Parallel Creation Stories

A comparison of the biblical book of Genesis to the Sumerian *Epic of Gilgamesh* reveals a host of elements that suggest both works shared a common origin. Written copies of the Sumerian epic date to about 2100–2000 B.C.E., while the earliest written version of Genesis is thought to date to about 1000 B.C.E.

Parallels between the texts appear at the very beginning of each story. In both, humans are created from clay or dust. In Genesis, when Eve eats of the fruit of the Tree of Knowledge, she and Adam gain self-awareness. In *Gilgamesh*, it is a woman who gives consciousness to the wild man Enkidu, who enters into civilization and becomes Gilgamesh's companion. A serpent in both tales is the cause of humankind's fall. In Genesis, it is the serpent who tempts Eve to eat the apple that results in her and Adam's banishment from Eden. In *Gilgamesh*, a serpent eats the plant that Gilgamesh must consume in order to achieve immortality. Genesis famously features the story of Noah, who, warned by God, builds an ark to survive a flood sent to punish humans for their wickedness. *Gilgamesh* tells of Utnapishtim and his wife, who are warned about a great flood and survive by building a boat.

Several of these common elements reflect cultural beliefs that were shaped by the environments of the societies that created the stories. For example, in a desert environment where many snakes are poisonous, the serpent is frequently looked upon as a bringer of death or misfortune. The flood is another typical symbol of destruction or calamity in regions such as Mesopotamia, where floods are frequent occurrences. Some of the stories may even reflect historical knowledge. It is possible that the story of the great flood was a memory of an actual event in the region that became mythologized and handed down through oral and, later, written tradition.

more than 300 feet (91 m) up on the face of a cliff at the frontier of the Persian Empire. In it, Darius proclaimed his victory against a dozen major enemies and his blessing by the gods.

Another major function of writing was to record religious concepts that began as orally transmitted stories. The most important of these works are the *Epic of Gilgamesh*, written around 1800 B.C.E., and the *Enuma Elish*, composed about 1700 B.C.E. Both present Sumerian understandings of how and why humankind was created and what humans could expect in this life and afterwards.

EVOLUTION OF THE ALPHABET

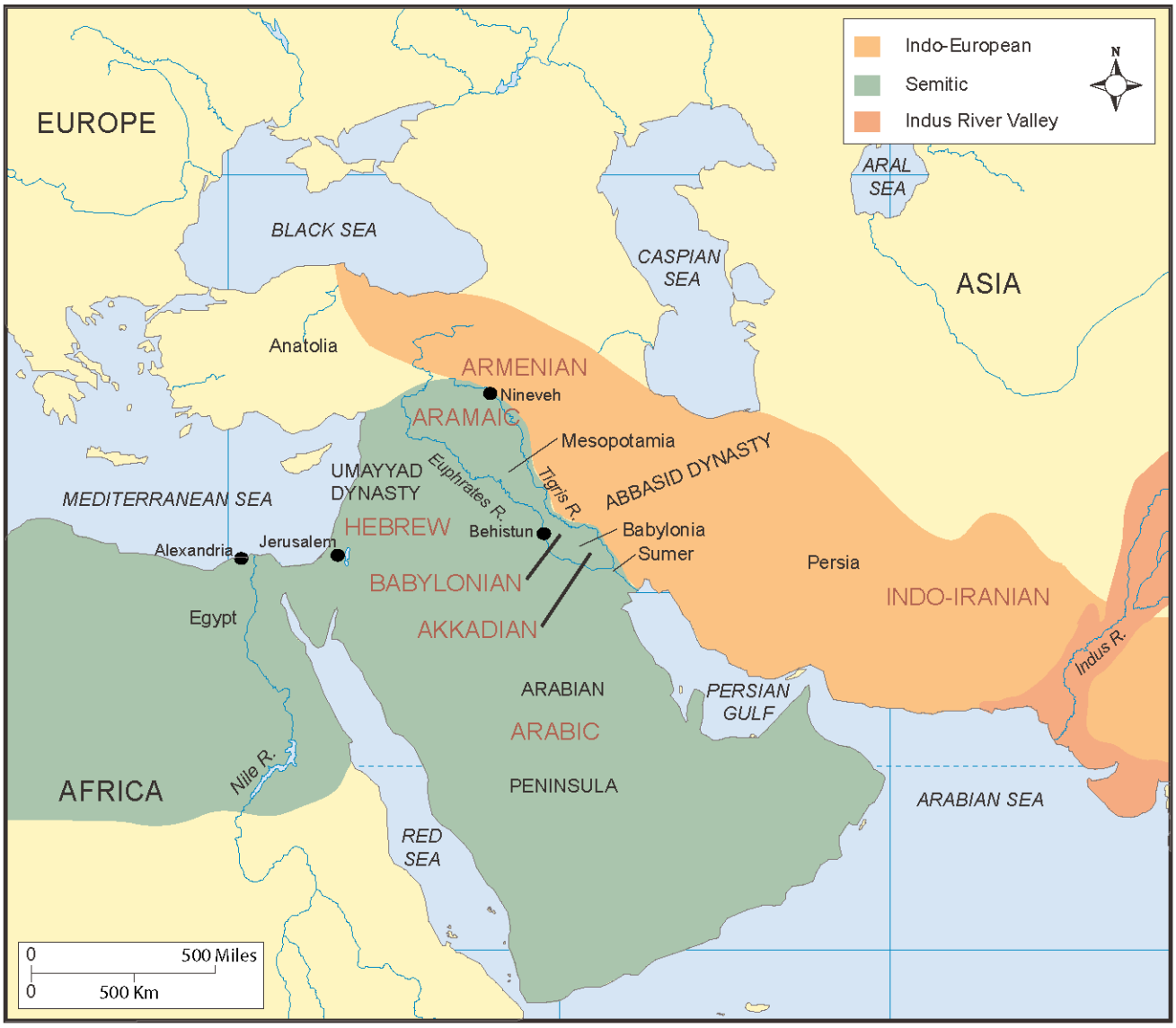
Because cuneiform was not based on the sounds of a particular language, the illiterate conquerors of Sumer, including the Akkadians and Babylonians, adopted the writing system to record their own languages. It continued to be used for scientific texts in the region until the beginning of the Common Era. However, for everyday commercial transactions and wider government and literary uses, cuneiform eventually gave way to more simplified systems of writing.

Between 1400 and 1200 B.C.E., the Phoenicians, a people living along the eastern coast of the Mediterranean, developed a system of writing that was simpler to learn and write and that could be mastered fairly quickly. The Phoenician alphabet was based on 22 symbols or letters, each of which represented a specific sound. This meant that any word, Phoenician or foreign, could be recorded in this new writing system by using the letters in the correct combination. This was of particular importance to the Phoenicians, who developed an extensive trade network throughout the Mediterranean. The Phoenician alphabet greatly facilitated communication and recordkeeping because it could be used not only by the Phoenicians but also by their trading partners.

This simplified system of writing appealed to many of the Phoenicians' trading partners, including

MAJOR LINGUISTIC GROUPS

Southwest Asia's languages fall into two groups, Semitic and Indo-European. Semitic languages include Arabic, Hebrew, Aramaic, Akkadian, Babylonian, and Persian (Farsi). Several waves of migration spread Semitic languages from Africa across the Arabian Peninsula between 3000 and 2500 B.C.E. The Indo-European languages include English, German, Celtic, Hindi, Armenian, and Indo-Iranian. Many linguists and archeologists believe Indo-European languages came to Southwest Asia with peoples invading or migrating from the Caucasus and southern Russia. Indo-European languages appeared in the Indus River Valley some time around 3000 B.C.E., and later spread into what are now Iran and Afghanistan.



the Hebrews and the Arabs. The Greeks adopted it around 800 B.C.E., and they, in turn, introduced it to the Etruscans and Romans who were living in the Italian Peninsula. As the Roman state expanded across Europe, North Africa, and the ancient Middle East, they brought the Phoenician alphabet with them. By the time of the collapse of the western Roman Empire in C.E. 476, the Phoenician alphabet had become the standard script throughout most of the Western world.

Spread of Literacy

For most of history, the ability to read and write was the province of a few select individuals, usually the

LANGUAGE AND WRITING

CA. 3100 B.C.E. Ancient Mesopotamians develop the earliest written script, cuneiform, which uses symbols to represent objects and ideas

CA. 3000 B.C.E. Speakers of Indo-European languages migrate from Caucasus and southern Russia to Middle East and Indus River valley

CA. 3000–2500 B.C.E. Semitic languages spread from Africa across Arabian Peninsula

CA. 1800 B.C.E. *Epic of Gilgamesh*, Sumerian poem considered the earliest known work of literature, written down

CA. 1786 B.C.E. Code of Hammurabi, oldest law code still in tact today, recorded in Babylonia

CA. 1700 B.C.E. *Enuma Elish*, early Babylonian creation myth, composed

CA. 1400–1200 B.C.E. The Phoenicians, a people living along the eastern coast of the Mediterranean, develop phonetic alphabet

CA. 800 B.C.E. Greeks adopt Phoenician alphabet and introduce it to Europe

515 B.C.E. Date of the Behistun Inscription, carved into the cliffs above the oasis at Behistun, in modern-day Iran, recording the military achievements of the Persian King Darius I, the Great (r. 522–486 B.C.E.)

CA. 300 B.C.E. Library founded at Alexandria, Egypt; grew into ancient world's foremost center of knowledge and learning

CA. C.E. 300–700 Library at Alexandria destroyed

C.E. 661–1258 Islamic Umayyad and Abbasid dynasties spread literacy throughout Southwest Asia, North Africa, and Iberia (modern-day Spain and Portugal)

wealthiest and most influential members of their societies. Early rulers soon came to realize that literacy conferred many advantages, and some took pains to compile and preserve written works as a way to strengthen their kingdoms. The Assyrian king Ashurbanipal (r. ca. 669–627 B.C.E.), for example, was both literate and a collector of texts. He ordered a library to be built in the imperial city of Nineveh to house a collection of works from the various lands he conquered. Archeologists discovered the ruins of this library between C.E. 1849 and 1852. More than 26,000 pieces of tablets have been excavated from the site, representing approximately 10,000 documents.

The Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), had been instructed by his teacher, the Greek philosopher Aristotle (384–322 B.C.E.), to respect all knowledge regardless of who produced it, to preserve it, and to use it for the improvement of humankind. As Alexander conquered Southwest Asia in the 330s and 320s B.C.E., he had libraries built throughout his new domains. These centers were meant not only to preserve knowledge, but also to be active centers of learning. The most famous library in the ancient world was founded in the Egyptian city of Alexandria (named after Alexander) in the third century B.C.E. Purported to hold virtually all of the knowledge compiled by the ancient civilizations of the Mediterranean and Middle East, it was destroyed some time between the fourth and eighth centuries C.E.

Religions of Southwest Asia also played a key role in the spread of literacy. Christianity, Judaism, and Islam are religions "of the book," that is, they are based on written sacred texts. In these faiths, it is essential that each of their followers be able to read the texts to fully understand the word of God. This aspect of these religions promoted the notion that literacy was not just a luxury for the wealthy and powerful, but an important path to a better understanding of the faith. Jews established educational centers in ancient Jerusalem

and elsewhere in their lands many years before Ashurbanipal built his library. Under the rule of the Islamic Umayyad (C.E. 661–750) and Abbasid (C.E. 750–1258) caliphs, literacy spread throughout North Africa, the Arabian Peninsula, and the areas of modern-day Iran and Iraq. Universities offering instruction in science, history, mathematics, medicine, and religion were established in the Islamic Empire long before they appeared in Western Europe.

The development of writing was one of the most important events in history. It not only allowed people to share ideas and information while separated by physical distance but also to pass the ideas and knowledge of one generation to another.

See also: Assyria; Babylonia; Darius I, the Great; Jews and Judaism; Mesopotamia; Persia; Phoenicians; Sumer.

FURTHER READING

Casson, Lionel. *Libraries in the Ancient World*. New Haven, CT: Yale University Press, 2002.

Glassner, Jean-Jacques. *The Invention of Cuneiform: Writing in Sumer*. Translated by Zainab Bahrani and Marc Van de Mieroop. Baltimore: Johns Hopkins University Press, 2003.

Harris, William V. *Ancient Literacy*. London: British Museum, 1991.

Nakanishi, Akira. *Writing Systems of the World: Alphabets, Syllabaries, Pictograms*. Rutland, VT: Tuttle, 1990.

Niditch, Susan. *Oral World and Written Word: Orality and Literacy in Ancient Israel*. London: SPCK Press, 1997.

Lydians

A wealthy people whose empire extended from the Aegean coast of Asia Minor across the western half of Anatolia (modern-day Turkey) and who dominated the region from about 690 to 546 B.C.E. Lydia had been part of the Hittite Empire, but became an independent kingdom after the collapse of the latter in the twelfth century B.C.E.

ECONOMY AND TRADE

Lydia was abundant in natural resources, including precious metals and fertile soil that regularly yielded surplus harvests. The Pactolus River was a particularly rich source of gold and electrum, an **alloy** of gold and silver. The gold from the Pactolus formed the basis of the legend of King Midas, who was said to turn everything he touched to gold. The Lydians used gold to mint the world's first known coins around 660 B.C.E. Lydia's agricultural surplus and high quality metalwork made the capital city of Sardis an important commercial center. According to the Greek historian Herodotus, the Lydians were the first people to build permanent shops for the sale of goods.

HISTORY

Lydia became a powerful empire under the Mermnad dynasty, whose founder was King Gyges (r. ca. 680–ca. 652 B.C.E.). Under his leadership, the kingdom expanded aggressively, seeking to annex Greek colonies on the western shores of Asia Minor. Although Gyges engaged in aggressive tactics close to home, he was diplomatic with more distant foreign powers, sending impressive gifts to several Greek **city-states**. These generous gifts kept the mainland city-states from interfering with his attacks against Ionian Greek cities in Asia Minor. Gyges was killed in a battle against the Cimmerians, a people living east of Lydia, in 652 B.C.E.

Gyges' son, Ardys II (r. ca. 652–ca. 625 B.C.E.), assumed the throne and set about retaking the Lydian cities that the Cimmerians had captured. With the help of the powerful Assyrian Empire to the south, Ardys was able to defeat the Cimmerians in 640 B.C.E. During the remaining years of his reign, he continued to conquer Greek towns and ports along the Ionian and Aegean coasts. His grandson,

This gold coin minted in about 550 B.C.E. in Lydia (in what is now Turkey) depicts a lion and bull facing one another. Scholars believe the Lydians were the first civilization to mint and use coins. The country was famously rich with gold, and the name of the Lydian king Croesus became synonymous with great wealth. (HIP/Art Resource, NY)

Alyattes (r. ca. 610–ca. 560 B.C.E.), continued Ardys' tactics and his pattern of offering diplomatic bribes to the mainland Greeks, with much success. In 585 B.C.E., Alyattes signed a peace treaty with the Medes, which established the Halys River as the eastern border of the Lydian Empire.

Allyates' son, Croesus (r. ca. 560–ca. 546 B.C.E.), was the last king of Lydia. Lydia prospered under his rule to such an extent that the phrase "rich as Croesus" came to denote anyone of extraordinary wealth. Thereafter, however, the Persian Empire under Cyrus II, the Great (r. ca. 559–ca. 530 B.C.E.), presented an increasing threat to Lydia from the south. In 547 B.C.E., the Persians conquered Lydia, but Cyrus respected Croesus enough to made him a royal councilor until his death around 546 B.C.E.

The Lydians and the Ionian Greek city-states they had conquered were made a province, or *satrapy*, of the Persian Empire. Lydia was still under Persian rule when Alexander III, the Great (r. 336–323 B.C.E.), conquered the Persians in 330 B.C.E. Alexander absorbed the Lydians into the **Hellenistic** empire he created, and the Lydians subsequently adopted the Greek language and customs.

TURNING POINT

The First Coins

The world's first known coins were minted in Lydia during the reign of Gyges (r. ca. 680–ca. 652 B.C.E.). These early coins were oval-shaped ingots or bars made from electrum, an **alloy** of silver and gold. The gold was from the Pactolus River, and the silver may have been carried downstream from the Timolus and Sipylus mountains.

The Lydians collected the fine particles of gold by laying sheepskins on the riverbed and allowing the water to flow over them. The lanolin in the fleece held the gold but not the sand. The gold-covered sheepskins may be the origin of the myth of Jason's golden fleece.

In the sixth century B.C.E., King Croesus (r. ca. 560–ca. 546 B.C.E.) began to mint gold and silver coins. Small lumps of the metal were flattened out and each side was stamped with a tool or die that left an impression. One side typically showed a lion, which was the symbol of Lydia. The other side bore the king's symbol.

The government that issued the coin determined its value, which was indicated by the marks on the coin showing its weight. The invention of coinage made it possible to standardize prices for goods and attracted new buyers and sellers to the Lydian marketplace. It also facilitated trade by replacing the system of **barter**, in which goods of one type were traded for other goods that were considered of equal value. The small size of later coins made wealth portable, thus facilitating long-distance trade and commerce.

Lydia came under Roman rule in 133 B.C.E. and was incorporated into the Roman province of Asia Minor. In C.E. 296, it became a separate province as a result of the reorganization of the Roman Empire into eastern and western halves. By this time, however, the days of Lydian independence and power were long past.

See also: Anatolia; Persia.

FURTHER READING

Hanfmann, George M.A. *From Croesus to Constantine: The Cities of Western Asia Minor and Their Arts in Greek and Roman Times*. Ann Arbor: University of Michigan Press, 1975.

Ramage, Andrew. *King Croesus' Gold: Excavation at Sardis and the History of Gold Refining*. Cambridge, MA: Harvard University Press, 2000.

Roaf, Michael. *The Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts On File, 1990.

Stefoff, Rebecca. *The Ancient Near East*. Tarrytown, NY: Benchmark Books, 2005.

M

Mesopotamia

Region in southwest Asia between the Tigris and Euphrates rivers, known as the "cradle of civilization." "Mesopotamia" in Greek means "the land between the rivers."

Mesopotamia was at the heart of the Fertile Crescent, a swath of arable land surrounded by rugged and barren terrain that extended from the eastern shores of the Mediterranean Sea to the Persian Gulf. The climate and topography of Mesopotamia varies greatly from north to south. Northern Mesopotamia is dry, with thin soil and irregular rainfall, but the presence of the two rivers provides sufficient water for agriculture. Southern Mesopotamia consists of low-lying agricultural plains that have richer soil but receive much less rain.

Its location between the Tigris and Euphrates rivers made Mesopotamia an ideal setting for early efforts at agriculture and animal domestication. By creating sophisticated irrigation systems to divert water from the rivers, farmers in the region raised a variety of crops including emmer wheat and barley, from which they made gruel (a kind of thick porridge), bread, and beer. They also raised grapes, apples, onions, and root vegetables such as turnips.

The rivers, fed by spring snow melt from the mountains of Anatolia (modern-day Turkey), are an inconsistent source of abundance. Floods are irregular, both in timing and severity. In years of sparse snowfall, the flood is small and little water overflows the riverbanks. Heavier winter snowfall produces much more powerful floods that often cause tremendous damage.

Ancient farmers accommodated the patterns of flooding and, beginning around 5400 B.C.E., learned to harness the available water by creating irrigation systems. This allowed the development of large-scale agriculture that led to increased population. As the population grew, the inhabitants of the region developed increasingly sophisticated cultures and more **hierarchical** social structures. These developments, in turn, led to the rise of the world's first urban centers in Mesopotamia around 3000 B.C.E.

Five major civilizations thrived in ancient Mesopotamia: the Sumerians, Akkadians, Babylonians, Assyrians, and Persians. By the late fourth millennium B.C.E., the Sumerian civilization, which arose in the mid-sixth millennium B.C.E., had grown from small agriculture communities into a dozen **city-states** in southern Mesopotamia. The most important of these were Sumer, Ur, Uruk, Kish, Nippur, Umma, Eridu, and Lagash. The Sumerians are best known for their creation of the **cuneiform** writing system that consisted of **pictographs**, symbols that stood for specific objects. Cuneiform was used to record everything from religious rituals

LINK IN TIME

Medicine in Ancient Mesopotamia

Medicine in ancient Mesopotamia combined elements of science, folk wisdom, and belief in magic. Ancient physicians diagnosed and treated diseases in a way similar to their modern counterparts, but understanding of the causes and cures of afflictions often was grounded in religious belief and superstition. Archeologists have unearthed cuneiform tablets dating as early as 2500 B.C.E. which describe ancient Mesopotamian medical practices. The best known collection of these tablets is the "Treatise of Medical Diagnosis and Prognoses." The oldest surviving copy dates to around 1600 B.C.E., but its contents reflect centuries of previously acquired medical knowledge. The tablets accurately describe the symptoms of almost all diseases known to modern science. They also provide valuable insights into how ancient Mesopotamians thought about and treated disease.

Mesopotamians frequently attributed illnesses to the work of divinities or evil spirits; different spirits were responsible for diseases in specific parts of the body. However, physicians also understood that some illnesses resulted from improperly functioning organs or unbalanced bodily processes. Although a clear distinction existed between medical treatment of disease and prayers or offerings to gods and spirits, the line between the two often was blurred.

Medical practitioners called *ashipu* were responsible for diagnosing the patient's disease. If *ashipus* were unable to establish a physical cause for a disease, they would attempt to uncover a supernatural origin. This involved determining which god or demon was responsible as well as whether the disease was a punishment for some transgression by the patient. The *ashipu* might then try to exorcise the offending spirit using charms or incantations.

The *ashipu* might also refer the patient to an herbal specialist, or *asu*. The *asu* today would be considered a doctor, and ancient medical texts refer to the *asu* by the term "physician." The asu prepared herbal and natural remedies and supplied "first aid"——making and applying bandages and treatments for wounds. Many of the plant substances the *asu* used had antiseptic and antibiotic properties. The *asu* also seems to have understood the importance of the placebo effect, in which many people benefit psychologically from the simple act of receiving treatment, even if the treatment is medically ineffective.

to tax collections, laws, business contracts, and personal correspondence. It was also used to compose the world's earliest works of literature, the *Epic of Gilgamesh* and the *Enuma Elish*, creation stories that explain the Sumerian understanding of the origins of humankind.

The Sumerians were also the first to erect monumental buildings, in the form of temple complexes called *ziggurats*. These structures consisted of several platforms set atop one another, each smaller than the one beneath it. At the top of the ziggurat was an altar used for religious ceremonies and sacrifices. Ziggurats dominated the skyline of Sumerian cities, with some attaining a height of 150 feet (46 m).

The Akkadians, who conquered Sumer around 2330 B.C.E., adopted these Sumerian innovations. Under the leadership of their king Sargon the Great (r. ca. 2334–ca. 2279 B.C.E.), the Akkadians unified Mesopotamia under their authority, thanks in large part to a series of roads that connected the region's subject populations and trading centers. The Akkadians also introduced a postal system that allowed royal, governmental, commercial, and personal correspondence to move swiftly through the empire. The Akkadian Empire was short-lived, however, and collapsed around 2150 B.C.E.

After the fall of Akkad, the Babylonian Empire (ca. 2000–539 B.C.E.) emerged as the most powerful political force in Mesopotamia. While the Babylonians adopted Sumerian writing, architecture, and religion, they also made their own significant contributions to Mesopotamian culture. They developed a

highly advanced mathematical system based on the number 60, which formed the foundation of modern systems of time measurement and geometry. The division of hours into 60 minutes and minutes into 60 seconds is derived from the Babylonian system, as is the division of the circle into 360 degrees.

By the eighth century B.C.E., the northern Mesopotamian empire of Assyria had become the region's dominant power. While the Assyrians made no significant contributions to science, math, or architecture, they pioneered key advances in government administration. King Tiglath-Pileser III (r. ca. 745–727 B.C.E.) formed an effective centralized government over a diverse and far-flung empire. His model of administration set the example followed by the Persian Empire under Cyrus II, the Great (r. ca. 559–ca. 530 B.C.E.). Both of these leaders incorporated newly conquered territories as locally governed provinces. Defeated former rulers or their subordinates typically were allowed to remain in power as imperial governors, subject to the authority of the emperor.

The last great power to arise in ancient Mesopotamia was the Persian Empire (648–330 B.C.E.). Perhaps the most lasting contribution of the Persian civilization was the founding of the world's first **monotheistic** religion, Zoroastrianism. Zoroastrianism spread rapidly throughout the empire during the reign of emperor Darius I, the Great (r. 522–486 B.C.E.), who was an ardent follower. The Persian Empire eventually fell to the Macedonian conqueror Alexander III, the Great (r. 336–323 B.C.E), in the late fourth century B.C.E. This ushered in a long period of foreign domination, during which Mesopotamia was ruled in turn by the Greeks, Romans, Byzantines, Muslims, and Ottomans.

See also: Assyria; Babylonia; Fertile Crescent; Persia; Sumer.

FURTHER READING

Bottero, Jean. *Religion in Ancient Mesopotamia*. Translated by Teresa Lavender Fagan. Chicago: University of Chicago Press, 2004.

Dalley, Stephanie, ed. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. New York: Oxford University Press, 1998.

Kramer, Samuel Noah. *History Begins at Sumer: Thirty-nine Firsts in Man's Recorded History*. 3rd ed. Philadelphia: University of Pennsylvania Press, 1981.

Odjik, Pamela. *The Sumerians*. The Ancient World Series. Englewood Cliffs, NJ: Silver Burdett Press, 1990.

Parpola, Simo. *Letters from Assyria and the West: The Correspondence of Sargon II, Part I*. Helsinki: Helsinki University Press, 1987.

Pollock, Susan, and Rita P. Wright. *Ancient Mesopotamia*. Cambridge: Cambridge University Press, 1999.

Mohenjo-Daro

See Harappa and Mohenjo-Daro.

Monsoons

Seasonal winds that bring heavy rains from the Indian Ocean to the Indian subcontinent. The term is derived from the Arabic word *mawsim*, meaning "season." The monsoons dramatically shaped the patterns of settlement, agriculture, and trade that developed in ancient India and had a great impact on life in ancient Southwest Asia.

The climate of the Indian subcontinent is a product of its geography, surrounded by large bodies of water to the east, south, and west, and by the Himalayan mountains to the north. Monsoons are caused by the fact that land heats up and cools down more quickly than water. This creates a drastic difference

between the temperature of the air over the land and that over the surrounding seas. The hot air rises, creating an area of low pressure that draws in cooler air from adjacent areas of higher pressure. During the summer, this causes cool air from the sea to blow inland. During winter the pattern reverses, and cooler air from the land blows out to sea.

The region has two monsoonal seasons. The summer, or southwestern, monsoon season lasts from June to September. During this time, the wind blows inland from the Indian Ocean to the southwest and moves northeast over the subcontinent. The air is heavy with water, which is released as it moves over the warmer landmass. This causes rapid and heavy rainfall in the region of modern-day Pakistan and central India. The southwestern monsoon often drops as much as 400 inches (1,000 cm) of rain in these four months. This rain allows the farmers to grow crops and to store water for irrigation during the dry months of the year.

The winter, or northeast, monsoon follows between October and December, with winds moving from the northeast to the southwest. In winter, the land cools off quickly, but the ocean retains heat longer. The resulting high pressure over the land and lower pressure over the water forces cool air from the Himalayas and central India to move towards the Indian Ocean. The monsoon winds pull much of the moisture out of the air and soil, creating a drier climate in central India. The moisture picked up by these winds falls as rain in western India.

The monsoons had a tremendous impact on agriculture in ancient Southwest Asia. Monsoonal rainfall and annual flooding made farming possible in areas of modern-day India and Pakistan. People of the Indus River valley civilization, for example, including those in the cities of Harappa and Mohenjo-Daro, used storage tanks to hold the monsoonal rainwater until it was needed in the fields.

The monsoons also facilitated trade between India and the outside world and allowed Indian merchants to become middlemen in the trade between the Roman world and Asia. Using the southwestern monsoon winds, Indian merchants sailed to Java, in modern-day Indonesia, where they sold Indian muslin and cotton **textiles** and purchased luxury goods on behalf of Roman clients. The Roman writer Pliny the Elder (23–79 C.E.) in his *Natural History* complained, "Not a year passed in which India did not take 50 million sesterces away from Rome," spent on pepper and luxury goods from Asia. The wealth that flowed into India led to the development of urban centers such as Kaveripattinam, whose existence was based on international trade.

See also: Agriculture; Technology and Inventions.

FURTHER READING

Livingston, Morna, and Milo Beach. *Steps to Water: The Ancient Stepwells of India*. Princeton, NJ: Princeton Architectural Press, 2002.

Pant, G.B., and K. Rupa Kumar. *Climates of South Asia*. Belhaven Studies in Climatology. New York: Wiley, 1997.

Muhammad

See Islam; Religion.

Myths and Epics

The forces of nature that shaped the everyday world of the peoples of the Near East and ancient Southwest Asia also played a central role in the tales told by the region's earliest inhabitants. The stories sought to explain the universe and the place of human beings in it.

The region's oldest surviving myths—traditional stories that help explain the mysteries of life—came from the Sumerians, who developed the world's first civilization in southern Mesopotamia in the late

fourth millennium B.C.E. Some of these early myths and epics also formed the basis of tales that were central to later Middle Eastern beliefs. These ancient tales help preserve the culture and traditions of a society.

The Mesopotamian civilizations that succeeded the Sumerians—such as the Akkadians, Babylonians, and Assyrians—worshiped many of the Sumerian deities and adopted and elaborated on Sumerian myths. By contrast, the Persians, who became the region's dominant civilization in the sixth century B.C.E., had a significantly different set of religious beliefs that produced a mythology unique from that of the earlier Mesopotamian cultures.

MESOPOTAMIAN COSMOLOGY

Sumerian, Babylonian, and Assyrian mythology derived from a common origin and show clear parallels with one another. The major Sumerian deities included An, the god of heaven; Ninlil, the goddess of creation; Inanna, the goddess of love and war; and Nanna, god of the moon. The Babylonians and Assyrians worshipped most of these same deities, although often under local names. In Babylonian mythology, for example, Inanna became Ishtar, but remained associated with love and war. These later cultures also modified the **pantheon** to include their own principal deities, such as the Babylonian god Marduk and the Assyrian sky god, Ashur.

Ancient Mesopotamian cosmology, or beliefs about the nature of the universe, focused on the association between divine beings and powerful earthly forces such as natural phenomena, human love, or warfare. Events on earth were believed to mirror events in the divine world. Natural disasters, such as floods or droughts, were understood as expressions of a deity's anger; earthly wars were said to reflect heavenly struggles between gods and goddesses.

Inanna and Dumuzi: A Sumerian Myth

The Sumerian's intimate connection to the natural world is exemplified by one of the oldest Sumerian myths, that of Inanna and Dumuzi, which explores the origins of the seasons. The story became widely popular and finds parallels in Greek mythology some two millennia later.

Inanna was the Sumerian goddess of love and war, known to the later Babylonians as Ishtar. According to the story, Inanna decides to travel to the underworld, which is ruled by her jealous sister, Ereshkigal. When Inanna arrives in the underworld, Ereshkigal orders her to be killed. Inanna's servant, however, escapes and appeals for help to the other gods, who eventually are able to restore Inanna to life. Nevertheless, Ereshkigal will not allow Inanna to return to the earth unless another body takes her place in the underworld. After refusing to let her servant or beautician take her place, Inanna sees her lover Dumuzi, who is drinking, laughing, and acting as if he is unaware that Inanna is even missing. The displeased Inanna selects Dumuzi to take her place in the underworld for six months of each year, with Dumuzi's sister spending the other half of the year below.

Inanna comes to regret her choice, however. During the six months when Dumuzi is in the underworld, Inanna is unhappy and allows nothing on earth to grow. When she is reunited with her lover, the crops and animals reproduce. The Greek myth of Persephone and Hades closely parallels this Sumerian tale. In the Greek story, Hades, god of the underworld, kidnaps Persephone and takes her to his realm, where she must remain for six months of each year. Persephone's mother, Demeter, the goddess of grain, mourns during these months and will allow nothing to grow until her daughter returns each spring.

Enuma Elish

Enuma Elish is the name of the ancient Babylonian creation myth. However, this work does not simply tell the story of the origin of the universe, it offers a justification for the supremacy of the Babylonian's chief deity, Marduk, over all other gods. The title, which means "When on high," comes from the opening words of the tale. The oldest version of the story dates to about 1700 B.C.E., during the height of the Old Babylonian Empire.

In the story, Apsu, god of fresh waters, and his son, Mummu, conspire to kill several other gods. However, Ea, the god of waters under the earth, thwarts the plan by killing Apsu. Afterward, Apsu's wife, Tiamat, goddess of salt water, plans revenge

This carving of the Amorite demon Humbaba, genie and legendary guardian of the famed cedar forests of ancient Lebanon, is about 20,000 years old. In the ancient Sumerian poem the *Epic of Gilgamesh*, the title hero and his companion Enkidu cut off the demon's head in their pursuit of the tree of immortality. (Erich Lessing/Art Resource, NY)

against these rival gods for causing her husband's death. Some deities support Tiamat in her plan, while others oppose her. Those opposed to Tiamat select Ea's son, Marduk, to do battle with her. In the ensuing combat, Marduk kills Tiamat and creates the world from her corpse.

Tiamat's supporters are at first forced to serve the other gods. However, Marduk frees them by slaying Tiamat's second husband, Kingu, and creating humankind from Kingu's blood. In return, the gods make Marduk their king, elevating him over Enlil, who was chief deity of the Sumerians. This symbolizes the ascent of Babylonia over Sumer as the dominant power in Mesopotamia.

Epic of Gilgamesh

Whereas myths are tales of the gods, epics typically are tales of the exploits of humans. They often take the form of a continuous narrative of an individual's life, focusing on significant or heroic deeds that express the values considered to be important by members of the culture that created the epic. Epics can serve as valuable resources for historians. Read with judgment and care, epics can reveal a great deal about the daily life, values, fears, and accomplishments of the people they depict.

The *Epic of Gilgamesh* is the oldest known work of literature, with the earliest Sumerian versions dating to 1800 B.C.E. It tells of the relationship between the

LINK TO PLACE

The Watery Void

The Mesopotamian creation myths, like those of many other cultures, associate the origins of the universe and the creation of the earth with a primeval watery void. In many cases, these original waters symbolize chaos, disorganization, and death, and creation begins when the waters are no longer dominant. For example, the Babylonian creation myth, the *Enuma Elish*, relates that Apsu, the god of fresh waters, and his wife, Tiamat, goddess of salt waters, foment chaos by attacking the other gods. When the god Marduk finally kills Tiamat, he fashions the heavens and earth from her body.

Similarly, according to the traditional creation myth of the Cherokee people in the eastern United States, all creation was originally covered with water. Because none of the animals could live in the water, the sky above was overcrowded. One day the water beetle volunteered to dive beneath the water to see what was there. He found mud, which he brought up to the surface to create the land. When the mud dried, the animals moved to the land and populated the earth.

The Iroquois of the northeastern United State also tell of a watery abyss at the start of creation. A community of people, however, dwelt in the Sky World above. One day, a woman in the Sky World dreamed that a certain tree was the source of light. She asked the men to dig up the tree to make room for more light. When they did so, the tree fell into the hole they dug, and the Sky World was plunged into darkness. The men then threw the woman into the hole. As she fell toward the abyss, a hawk tried to slow her fall, but he could not support her and he asked the other animals to create solid ground to hold her. Ducks brought mud from the ocean floor and smeared it onto the backs of turtles to form the land. In this manner, the earth was formed, and the people on it descended from the woman from the Sky World.

In each of these ancient stories, despite their existence over great distances, primal water is a recurring symbol from which the world comes into being.

mythical hero-king Gilgamesh, who is believed to have ruled around 2700 B.C.E., and his adventures with a friend named Enkidu. Because **archeologists** have identified two individuals named in the story as historical kings of Sumer, scholars suspect that Gilgamesh is based on an historical figure.

In the epic, Gilgamesh is portrayed as mostly divine, but also part human, and a harsh ruler. In response to his subjects' complaints about Gilgamesh, Aruru, the goddess of creation, fashions the wild man Enkidu as a rival and distraction for the king. After an inconclusive fight with Enkidu, Gilgamesh proposes that the two go on a journey to the Cedar Forest to kill a demon. This begins a series of adventures that cause Gilgamesh and Enkidu to run afoul of the gods. After the gods kill Enkidu, Gilgamesh sets out on another journey to avoid Enkidu's fate by achieving immortality. In the end, Gilgamesh loses his chance at immortality but realizes that humans can live on through the works of culture and civilization they leave for future generations.

The *Epic of Gilgamesh* combines elements of both myth and epic. Like a myth, it deals with larger philosophical questions of the meaning of existence, humankind's purpose in the world, and the mystery of death. It also describes the world of gods and goddesses and reflects the uncertain relationship between the gods and humankind in Sumerian culture. However, in its focus on the adventures of an heroic individual and his struggles, it embodies the essence of an epic. The hardships that Gilgamesh and Enkidu encounter—hunger, illness, flooding, and death—represented real challenges in the lives of all Sumerians, and the actions of the characters served as examples of how humans can find meaning in life, even if they cannot control their fate.

PERSIAN COSMOLOGY

Persian mythology has its roots in the tribal cultures of Central Asia and what is now Iran. Unlike the Mesopotamians, the Persians did not have an extensive pantheon populated with gods representing various natural forces. Instead, the Persian religion, Zoroastrianism, saw existence as a struggle between the forces of good and evil, represented by the divine figures Ahura Mazda and Angra Mainyu, or Ahriman.

Many characters in the Persian myths are not gods but powerful heroes and their terrifying demonic opponents—figures with often superhuman abilities who are, nevertheless, not divine. Among the most important of the heroes is Rostam, the greatest of Persian champions who, like the later Greek hero Hercules, must perform seven daunting tasks while attempting to save the life of his king. Several Persian tales involve battles between Rostam and fierce beasts that represent chaos and evil. A principal evil figure is Zahhak, a demon with three mouths, six eyes, three heads, and with serpents growing from his shoulders. According to Persian myth, the hero Oraetaona defeated Zahhak and chained him to a mountain. However, the myth goes on to say that, at the end of the world, Zahhak will break his bonds and ravage the world until he is defeated by another hero.

THE SHAHNAMA

The central collection of Persian myths is called the *Shahnama*, which provides a mythical history of Persia since the creation of the universe. The *Shahnama* combines elements of myth and epic, focusing as it does on both the actions of divine characters who shape earthly events, and on the heroic exploits of humans. As an extended poem of some 60,000 couplets (pairs of rhyming line), the *Shahnama*'s structure is typical of epics. Like myths, however, the story attempts to explain the origins of the Persian people and major events that shaped Persian civilization.

The *Shahnama* begins with a creation story that includes an account of the first human, Keyumars, who also became the world's first king. One of the great early heroes in the tale is Keyumars' grandson, Hushang, who defeats an army assembled by the son of the evil spirit Angra Mainyu, or Ahriman. The poem credits Hushang with inventing agriculture, irrigation, and ironworking; domesticating livestock; and discovering how to make fire. According to the *Shahnama*, the latter feat occurred when Hushang hurled a piece of flint at a serpent and missed. When the flint struck another rock, it produced sparks, which Hushang realized could be used to start a fire.

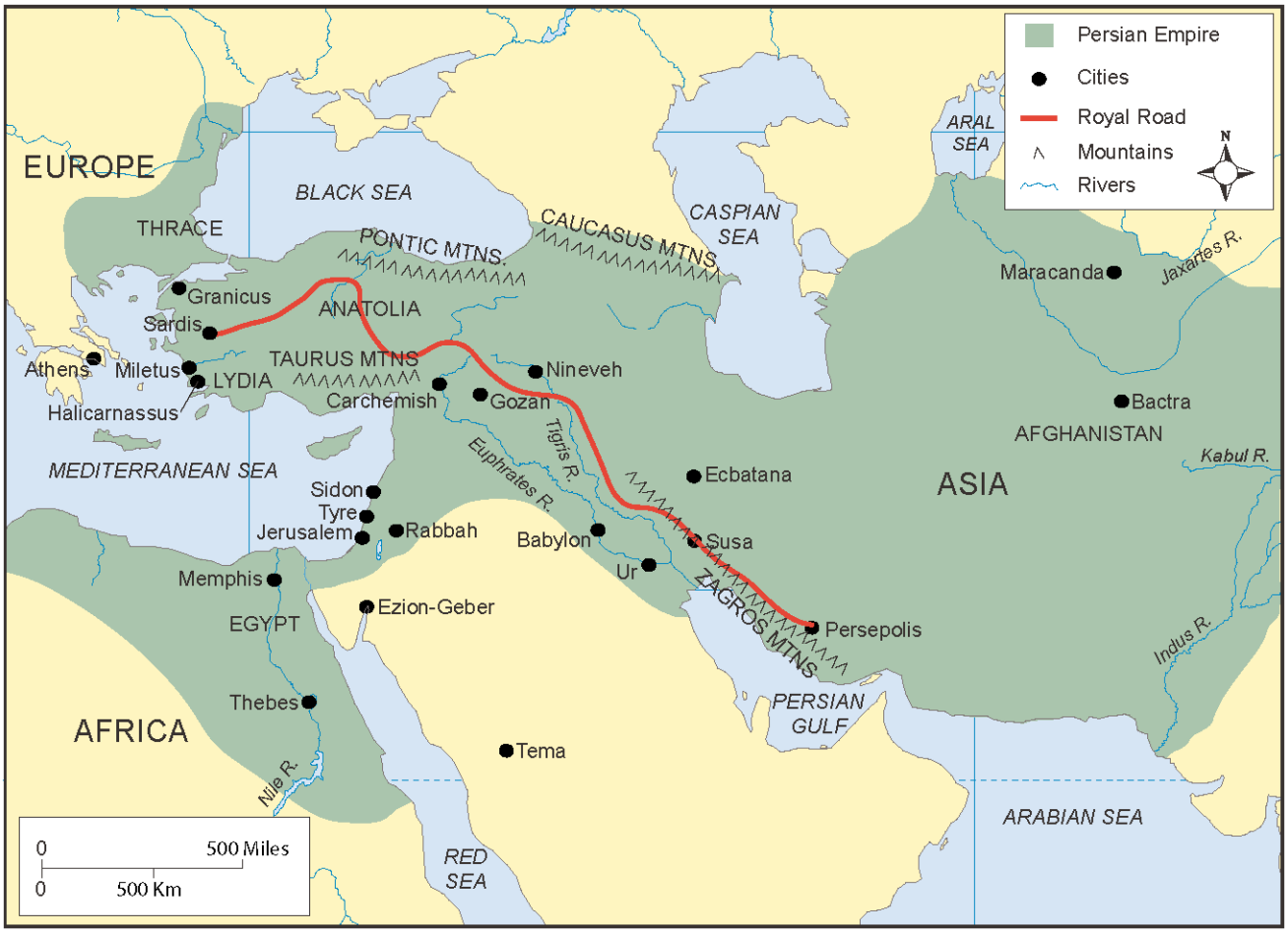
This introductory portion of the *Shahnama* is relatively brief, less than 5 percent of the entire work. Most of the story is devoted to the so-called "Age of Heroes," a semi-legendary history of the Achaemenid Persian Empire from its prehistoric roots until its defeat at the hands of the Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), in the fourth century B.C.E. This portion of the work contains the story of the seven labors of Rostam. The poem concludes with a history of post-Alexandrian Persia through the conquest of the Sassanid Persian Empire (C.E. 226–651) by Arab Muslims. Historians consider this portion of the text to be quite accurate, despite its romantic language and clear antipathy toward the Arabs, whom it calls "the army of darkness."

The *Shahnama* serves both to inspire its readers with the glories of Persia's past and to caution them about the transient nature of the world. While it praises and immortalizes the achievements of both mythical and historical Persians, it also shows that even great empires and heroes can come and go in the blink of an eye. It asks its readers to contemplate the impermanence of life and the small scope of their own hopes and desires. Because one's time on earth is short, it argues, one should avoid evil and strive for justice and truth. Although the *Shahnama* shares little with most Mesopotamian myths, it does serve the same basic purpose—to convey the central ideas of its culture in a form that is both approachable and memorable.

See also: Babylonia; Culture and Tradition; Language and Writing; Persia; Religion; Society; Sumer; Zoroastrianism.

THE PERSIAN EMPIRE, CA. 550-330 B.C.E.

In 525 B.C.E., when the Persian king Cambyses II conquered Egypt, the Persian Empire became the largest in history. It stretched from the Mediterranean coast in the west to India in the east.



FURTHER READING

Dalley, Stephanie, ed. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. New York: Oxford University Press, 1998.

Mason, Herbert, trans. *Gilgamesh: A Verse Narrative*. New York: Mariner, 1970.

McCall, Henrietta. *Mesopotamian Myths*. Austin: University of Texas, 1990.

Wolkstein, Diane, and Samuel Noah Kramer. *Inanna: Queen of Heaven and Earth*. New York: Harper and Row, 1983.

P

Parthian Empire

Empire centered in ancient Persia (present-day Iran) between the Caspian Sea and the Persian Gulf, a kingdom that controlled the eastern Arabian Peninsula and much of Central Asia from about 250 B.C.E. to about C.E. 226. Its location brought it into contact with three of the leading civilizations of the **era**: that of Rome, of India, and of China.

The Parthians, originally called the Arsacids, were a branch of the nomadic Scythian peoples who lived east of the Caspian Sea. At the time of the rise of the Parthians, the Seleucid dynasty was the major power in the area, having taken over Persia following the death of Alexander III, the Great (r. 336–323 B.C.E.). Arsaces (247–211 B.C.E.), chieftain of the Arsacids, led a rebellion against the Seleucids and won control over the region of Parthia, in what is now northern Iran. The Parthians closed off trade routes between the Seleucid lands and China, which led to the eventual fall of the Seleucids in 60 B.C.E. As the Seleucids declined in power, the Parthians conquered new lands including Bactria, in northern India. By the late first century C.E., the Parthian kingdom emerged as an empire that reached from Armenia to India.

Ruling over an expanding empire populated by peoples that spoke different languages, practiced different faiths, and retained their own cultures required new approaches to governance. The Parthians allowed subject peoples to retain their own leadership and customs as long as they paid **tribute** to the Parthian king. Parthia reopened the trade routes with Han China (206 B.C.E.–C.E. 220), including the famed Silk Road, which stretched eastward from the Mediterranean Sea to China and supplied Asian luxury goods to the West.

The Parthian Empire rose to dominance in the Middle East and Central Asia at roughly the same time as the Roman Empire was expanding its power and influence over Europe and North Africa. As the Roman Empire expanded eastward, its subjects encountered and clashed with Parthians and invaded Parthian lands in 53 B.C.E. However, the Parthians, known as skilled archers and horsemen, defeated the Romans at the Battle of Carrhae, in modern-day Turkey, and conquered Roman-held territory in Syria. Fighting between the two empires continued on and off for three centuries.

Internal struggles weakened the Parthian Empire and contributed significantly to its collapse. The power of the Parthian nobility was based on its military leadership, the nobles' ability to gain more direct control over their land, and the peasants being free of royal interference. Over time,

however, the nobles began to refuse to pay their taxes or answer the king's call to serve in the army. With less money coming into the government, and an unreliable military force to command, royal authority decreased.

In C.E. 110, the Parthians conquered Armenia and deposed the king, who was a **vassal** of Rome. This led once again to war with Rome, and over the next 90 years, the empires fought a series of wars that weakened both kingdoms considerably. Invasions from the Sassanid rulers of Persia led to further loss of Parthian territory. By C.E. 224, the Sassanids had completed the conquest of Parthia to become the dominant force in the region; the Parthian Empire fell soon after.

See also: Persia; Scythians.

FURTHER READING

Debevoise, Neilson C. *Political History of Parthia*. Chicago: University of Chicago Press, 1969.

Garthwaite, Gene R. *The Persians*. Malden, MA: Blackwell, 2005.

Wilcox, Peter, and Angus McBride. *Rome's Enemies: Parthians and Sassanid Persians*. Oxford: Osprey, 1986.

Persia

One of the largest empires of the ancient world, based in what is now Iran and extending from Asia Minor (modern-day Turkey) to the Persian Gulf and the Indus River. The Achaemenid Dynasty, which ruled over this empire, established a culture that differed significantly from the Mesopotamian empires that previously had dominated Southwest Asia and the Near East.

GROWTH OF THE EMPIRE

King Achaemenes founded the first Persian state in central Iran around 700 B.C.E. At this time, the Persians were subjects of the kingdom of Media, to whom they paid **tribute**. Within 50 years, the Persians had moved to southern Iran, where they split into two separate kingdoms. In 550 B.C.E., Cyrus II, the Great (r. ca. 559–ca. 530 B.C.E.), united these two Persian states and defeated the Medes to establish an independent Persian kingdom. He subsequently conquered the kingdom of Lydia in Asia Minor (modern-day Turkey) and expanded his empire into southern Mesopotamia.

In 539 B.C.E., Cyrus captured the city of Babylon, toppling the Neo-Babylonian Empire and setting the tone for Achaemenid political administration over the next 200 years. He issued a proclamation promising not to destroy the local culture or institutions, nor to terrorize the citizens. This policy stood in stark contrast to those of the Assyrians and Babylonians, who forcefully subjugated conquered peoples and repressed local cultures. The following year, Cyrus reinforced his reputation for religious tolerance by ending the so-called Babylonian Exile. In ca. 586 B.C.E., the Babylonians expelled the Jews from Jerusalem and destroyed the Jewish temple because the Jews refused to worship Babylonian gods. Almost 50 years later, Cyrus allowed the Jews to return home and rebuild the temple. Cyrus's expansive treatment of the Jews, then a relatively insignificant tribal people unrelated to the Persians, was extraordinary for its day.

Cyrus's son, Cambyses III (r. ca. 530–522 B.C.E.), succeeded his father as king. Cambyses' major contribution to the Empire was the conquest of Egypt in 525 B.C.E.

Darius I, the Great (r. 522–486 B.C.E.), followed Cambyses on the throne and conquered lands all the way to the Caucasus and northward into modern-day Armenia. Under Darius, the Persian Empire grew to include the Sudan, Egypt's Nile Valley, Lydia, Babylon, all of Anatolia (modern-day Turkey), Thrace (in what is now Bulgaria), the Caucasus, Afghanistan, parts of Central Asia, and northern India. This far-flung empire, comprising a wide diversity of cultures, dominated the ancient world but proved a challenge to rule.

RULING AN EMPIRE

To maintain effective control over their empire, the Persians divided it into administrative *satrapies*, or provinces, each of which was organized by ethnic identity and often had a small Persian population present. A governor called a *satrap* ruled each province as a virtual client king, exercising almost unlimited authority to collect taxes, enforce laws, act as the supreme judge, and control all political appointments. In times of unrest, the satrap also served as commander in chief of the local army district. Despite their broad powers, satraps ruled in the name of the Persian emperor and were subject to close oversight by a royal secretary, a council of Persian advisors, and an official known as "the eye of the king," who made an annual inspection of each province.

The system of satrapies traced its roots to the Persians' former overlords, the Medes. Although Cyrus overthrew Median domination, he retained their basic administrative organization, applying it to his earliest conquests. Darius expanded and refined the system, creating 23 satrapies throughout the empire (some divided into sub-units for easier administration) and standardizing the amount of tribute collected by each satrap. The system allowed for local rule of subject peoples while allowing the emperor to retain close central control of affairs in distant corners of the empire.

Another significant challenge facing the Persians was facilitating travel and communication across a vast land empire. Darius responded by building the Royal Road, a major thoroughfare that allowed the Persians to deliver messages quickly and to move troops where and when they were needed. The road ran 1,677 miles (2,700 km) from the eastern capital of Susa (in modern-day Iran), to the primary capital of Persepolis, to the city of Sardis in modern-day Turkey. It was dotted with 111 transfer stations where riders could change horses, rest, and eat. A royal courier could travel the entire road in seven days. Many historians consider the Persian couriers to be the world's first postal system.

The Royal Road was just one of the steps Darius took to promote trade and commerce. He standardized weights and measures throughout the empire and introduced a gold coin of standard weight, the Daric. He also sent exploratory expeditions up the Kabul and Indus rivers and into the

ANCIENT WEAPONS

Persian Swords and Daggers

The ancient Persians used two types of bladed weapons in combat. The longer of the two was the *kopis*, a single-edged sword with a heavy curved blade. It may have evolved from the similarly shaped *khopesh*, used by the Egyptians and Canaanites. The term *kopis* is a Greek word meaning "to cut," but the ancient Greeks typically preferred straight-bladed sword called the *xipos*. In Greek art, Persian soldiers often are shown wielding the kopis or an axe.

Persian soldiers also carried a short dagger called an *acinaces*. The Scythians first used this type of weapon, but the Persians adopted it and made it famous. The popularity of the acinaces was so widespread that it even influenced the design of Chinese weapons. The acinaces featured a double-edged blade and was worn hanging from the right hip. It was intended to be used for quick, surprise thrusts.

Later medieval writers tended to confuse the acinaces with the *shamshir*, a curved sword used much later by Persian soldiers. The shamshir, however, was much closer in design to the kopis than it was to the acinaces. Ancient Greek and Roman authors state that the Persian king gave acinaces to warriors as a sign of favor, which suggests that the weapon was a dagger and not a sword. The first-century C.E. Roman Jewish historian Josephus also writes of "small swords, which were like the Persian acinaces in respect to their size. . . ." This, too, argues that the acinaces was a dagger.

Shown here are the remains of the palace of Cyrus II, the Great, founder of the Achaemenid dynasty of Persia and emperor of Persia from 559 to 530 B.C.E. Under Cyrus, Persia overthrew the dominance of the Medes in 550 B.C.E. and eventually united the Medes and Persians into one of the great empires of the ancient world. (SEF/Art Resource, NY)

Indian Ocean in search of new trading markets. Darius even ordered construction of a 125-mile-long (200-km) canal to connect the Mediterranean and Red seas. This provided a continuous water connection between Persian territories in Egypt and the eastern lands of the empire, greatly facilitating trade.

From the beginning of the Persian empire, its policies regarding captured lands were tolerant and fair, and the government respected the diversity of the people living in the empire. These policies were heavily influenced by Zoroastrianism, a **monotheistic** religion whose basic tenets included fair and equitable treatment of all individuals and respect for all living creatures. Cyrus's proclamation of mercy on capturing Babylon is preserved in a **cuneiform inscription** on an **artifact** known as the Cyrus Cylinder, an ancient large clay cylinder covered with writing. It describes Cyrus' defeat of Babylon and states that he returned the images or statues of various Babylonian gods to their temples. Under Darius, the empire also adopted a no slavery policy; all of the workers who built government projects under Darius were paid for their labor.

DECLINE AND FALL

At its height under Darius, Persia was the unchallenged master of Southwest Asia and the Near East, the largest empire the ancient world had seen to that date. The massive Persian army, and the relative ease with which the Persians dispatched and then assimilated their enemies, earned them the fear and respect of neighboring cultures. However, even the Persians were forced to deal with local uprisings. In the late sixth century B.C.E., Ionian Greeks in western Asia Minor rebelled against the Persian presence in their homeland.

THE PERSIAN EMPIRE

CA. 559–CA. 530 B.C.E. Reign of Cyrus II, the Great, who united the Persians and founded the first Persian Empire

CA. 530–522 B.C.E. Reign of Cambyses III, who added Egypt to the Persian Empire in 525 B.C.E.

522–486 B.C.E. Reign of Darius I, who expanded Persian lands to include Anatolia (modern-day Turkey), the Caucasus, the Sudan, parts of southeastern Europe, Central Asia, northern India, and the Sudan

CA. 499–479 B.C.E. Persian Wars, pitting Persia against Greek city-states led by Athens; end in Greek victory

334 B.C.E. Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), invades Persia

330 B.C.E. Alexander III, the Great, defeats Persian king Darius III at Issus and conquers Persian Empire, declaring himself new king of Persia

323 B.C.E. Seleucus I Nicator, a former commander under Alexander III, the Great, seizes power over Persia following Alexander's death

323 B.C.E–60 B.C.E. Seleucid dynasty rules over dwindling remains of ancient Persia

The Ionians appealed to other Greeks for assistance, and the Greek **city-state** of Athens came to their aid. This led to the Persian Wars (ca. 499–479 B.C.E.), fought between Persia and a coalition of Greek city-states. Both Darius and his successor, Xerxes I (r. 486–465 B.C.E.), underestimated the organization of the Greeks. Greek victories at the battles of Marathon (490 B.C.E.), Salamis (480 B.C.E), and Plataea (479 B.C.E.) ended the Persian invasion.

The Persians got their revenge against the Greeks during the Peloponnesian Wars (431–404 B.C.E.), which pitted the Athenian Empire against a coalition of city-states led by Sparta. The Persians supported the Spartans, whose defeat of Athens ended the Athenian Empire. This opened Greece up to invasion by the Macedonian king Philip II (r. 359–336 B.C.E.), who conquered most of the peninsula.

Following Philip's death, his son, Alexander III, the Great (r. 336–323 B.C.E.), took the throne. Alexander, who aspired to be the master of the ancient world, decided to lead an expedition against Persia, the greatest power of the day. Alexander invaded Persia in 334 B.C.E., sweeping his opponents before him and conquering great swaths of Persian territory. In 330 B.C.E., he defeated the Persian army and killed King Darius III (r. 335–330 B.C.E), proclaiming himself the new king of Persia. Alexander died just seven years later, however, and the empire he had fashioned quickly broke apart. His trusted commander, Seleucus I Nicator (358–281 B.C.E.) subsequently seized power in the region and established the Seleucid dynasty (323–60 B.C.E.) as rulers over Persia. However, the Seleucid Empire was only a shadow of what Persia had been in terms of size, military might, economic resources, and power in the region.

See also: Darius I, the Great; Indus River; Lydians; Parthian Empire; Technology and Inventions.

FURTHER READING

Allen, Lindsay. *The Persian Empire*. Chicago: University of Chicago Press, 2005.

Briant, Pierre. *From Cyrus to Alexander: A History of the Persian Empire*. Winona Lake, IN: Eisenbrauns, 2002.

Curtis, John, and Nigel Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. Berkeley: University of California Press, 2005.

Wiesehöfer, Josef. *Ancient Persia: From 550 B.C. to 650 A.D.* Translated by Azizeh Azodi. London: Tauris, 1996.

Phoenicians

Ancient seafaring people who lived along the east coast of the Mediterranean and who emerged as a dominant trading power in the region after 1200 B.C.E. The Phoenicians are best remembered for their major contribution to human culture—the invention of the world's first phonetic alphabet.

The origins of the Phoenicians are unclear, and most of what is known about them comes from external sources, particularly the writings of the Greek historian Herodotus (484–425 B.C.E.). The Phoenicians may have migrated from the Persian Gulf area around 3000 B.C.E. before settling along the coast of the eastern Mediterranean Sea in the region of Canaan, in modern-day Lebanon. During the second millennium B.C.E., this land was controlled by Egypt, Hittites from Asia Minor (modern-day Turkey), and Assyrians from eastern Mesopotamia. As the power of these groups in the region faded beginning the thirteenth century B.C.E., the Phoenicians rose in influence.

TRADE AND GOVERNMENT

Phoenician trade prospered for two reasons. First, the majority of the goods they traded were items that brought high profits. These included cedar and pine timber, fine linen, embroidered cloth, wine, gold and silver jewelry, carved ivory from Africa, and glassware. Their most famous product was cloth colored with a purple dye made from snails that lived only along the shores of the Eastern Mediterranean. Second, the Phoenicians participated in transit trade, charging a fee to transport goods from other countries to overseas markets where they were in demand. By 1200 B.C.E., the Phoenicians had established a number of independent port cit-

TURNING POINT

The Phoenician Alphabet

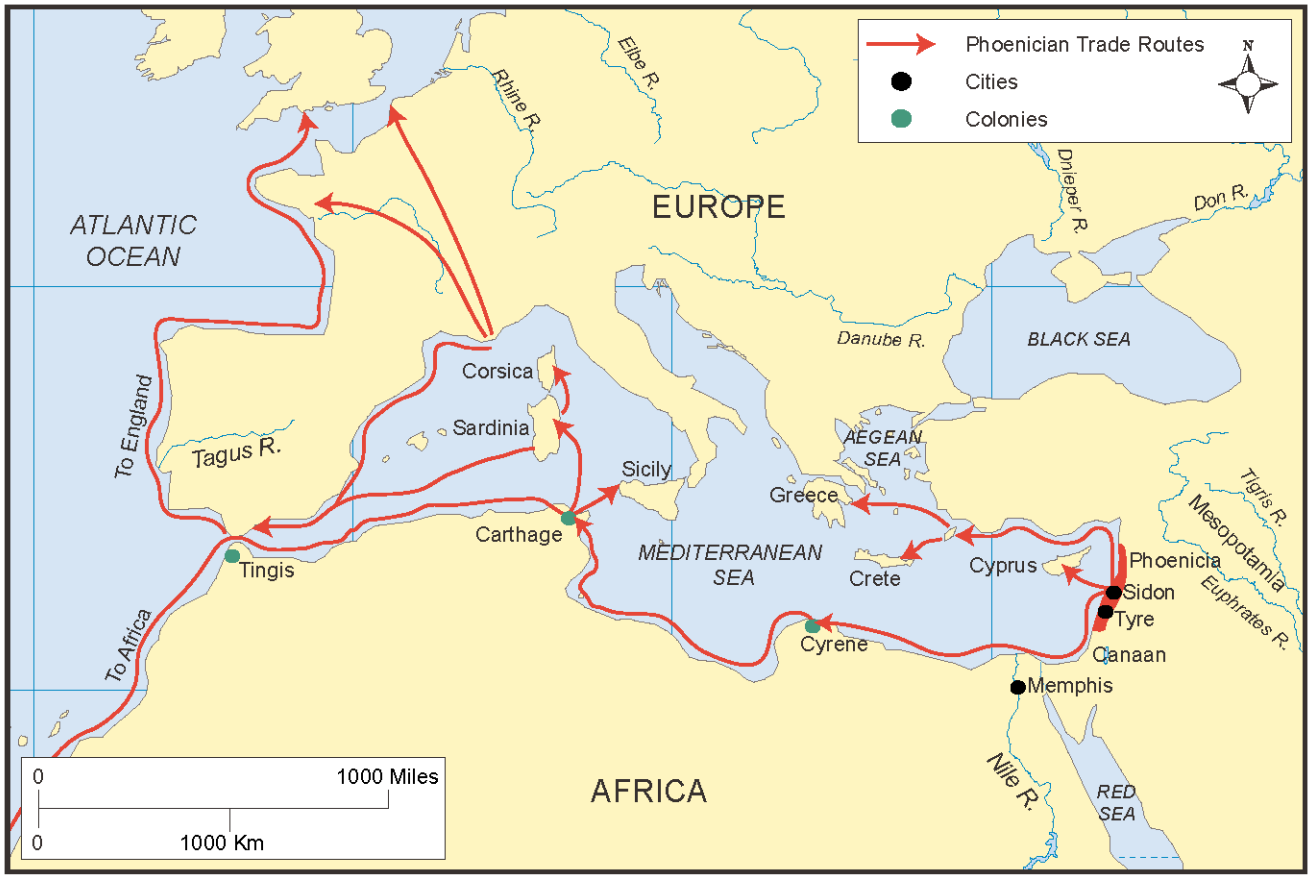
The Phoenician alphabet is derived from an earlier form of writing called Proto-Sinaitic script, which arose in the Sinai, a desert region in what is now southern Israel, around 1700 B.C.E. At that time, **Semitic**-speaking peoples under Egyptian rule inhabited this area. These people adapted existing Egyptian hieroglyphs to create their own written language. The pronunciation of each letter was based on the shape of the hieroglyph chosen. For example, the hieroglyphic symbol for a house represented the sound "b," because the word for house in their spoken language was *beth*.

The Phoenician alphabet, a more stylized and linear version of Proto-Sinaitic, was one of several scripts that sprung from Proto-Sinaitic. Around 1300 B.C.E., a separate branch of the script that began to evolve in the Arabian Peninsula became the South Arabian script. Merchants carried this system of writing across the Red Sea to East Africa, where it eventually became the Ethiopic script, which is still used today.

Proto-Sinaitic, and most of the scripts that developed directly from it, do not include symbols for vowel sounds. When the Greeks adopted the Phoenician script around 800 B.C.E., it included four symbols for sounds not found in spoken Greek. The Greeks used these symbols to represent vowel sounds, which the Romans subsequently adopted for use in the modern, or Latin, alphabet. Similarly, the principal change that occurred in the transition from South Arabic to Ethiopic was the addition of marks to certain consonant symbols to indicate vowel sounds.

PHOENICIAN TRADE ROUTES, CA. 1200 B.C.E.

The Phoenicians were a seafaring people who mastered the art of trade, controlling trade routes on both land and sea.



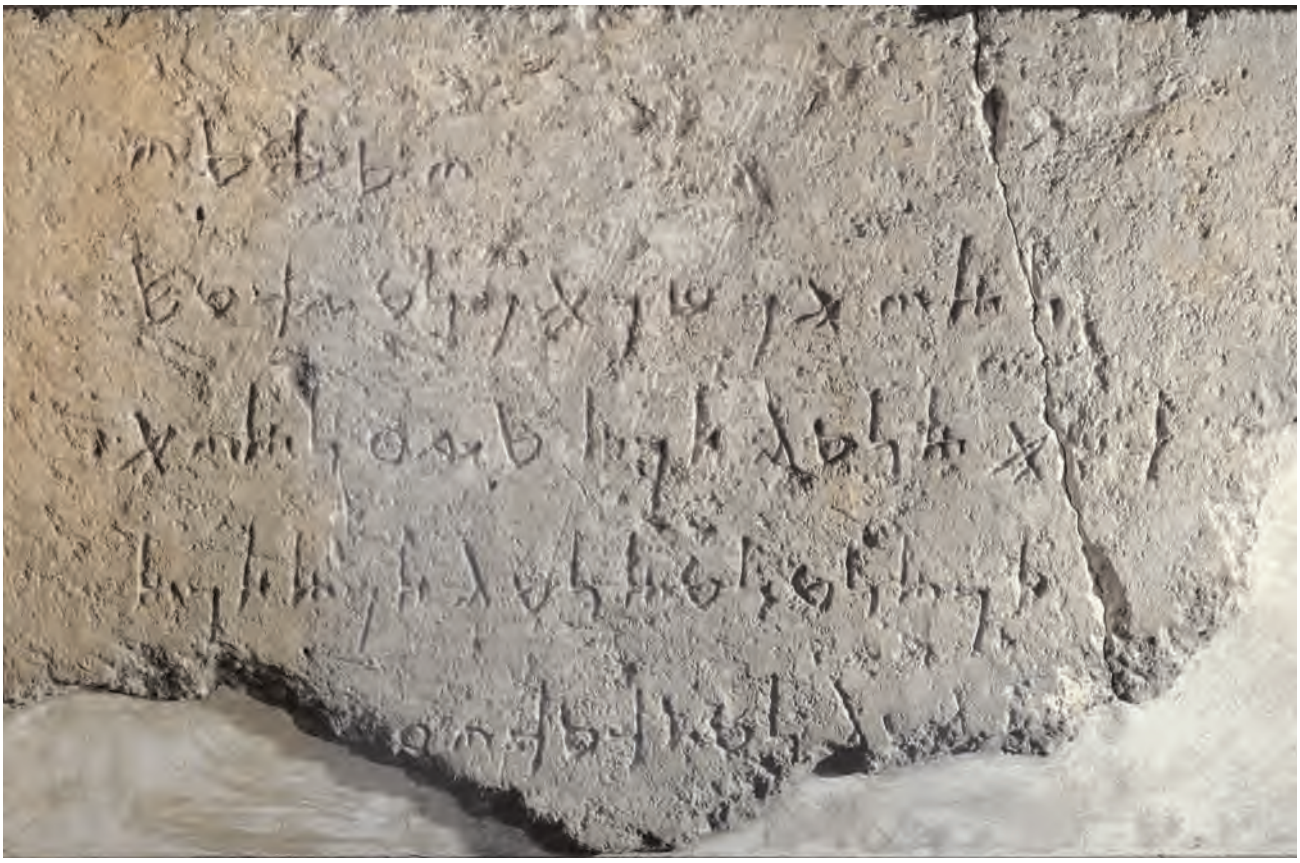
ies, the most important of which were Sidon and Tyre, located in what is now Lebanon.

To further their control over the Mediterranean Sea trade, and to keep their competitors from building up their own trading networks, the Phoenicians founded colonies along the coast of North Africa and on islands of the Mediterranean Sea including Cyprus, Corsica, and Sardinia. Chief among these was the colony of Carthage, founded in 814 B.C.E. in what is now Libya. Carthage eventually became a significant military power in its own right. The Phoenician trading network extended as far west as the Iberian Peninsula (modern-day Spain and Portugal). The Phoenicians controlled not only trade within the Mediterranean, but also the flow of goods such as silk and porcelain pottery from Asia, which entered the region exclusively through Phoenician ports.

Each Phoenician **city-state** was ruled by a king who governed the city and the countryside around it. He was advised by two groups: the priests and a council of elders, drawn from the upper classes. Since seaborne trade was critical to the economic success of each city, each new Phoenician settlement was built around a harbor and port. Near the harbor area was a market. These markets met the needs of the local population for food, clothing, and luxury goods imported from Asia and different places in the Mediterranean world. Each city was divided into sections in which different trades were located and was fortified by defensive walls.

ALPHABET

Early Phoenician traders used the ancient Mesopotamian writing system called **cuneiform**



This fragment of a Phoenician inscription from the Eshmun Temple in Sidon was found in modern Lebanon. Around 1200 B.C.E., the Phoenicians developed a simple alphabetic script for use in managing their commercial trading empire. The new alphabet, which spread throughout the Near East and Southwest Asia and was later adopted by the Greeks, forms the basis of the modern alphabet used throughout the Western world. (Erich Lessing/Art Resource, NY)

to record their business transactions. However, cuneiform was cumbersome because it required a working knowledge of 500 to 1,000 symbols, each of which represented a unique word or idea. Between 1400 and 1200 B.C.E., the Phoenicians developed a much simpler form of writing to manage their growing trade. The Phoenician writing system was made up of 22 letters, each of which stood for a unique spoken sound. It was easy to learn and could be used to record any spoken language.

The new alphabet was eventually adopted by other peoples, who recognized its superiority over cuneiform and other writing systems based on **pictographs**, such as Egyptian **hieroglyphics**. The Greeks adopted the Phoenician alphabet around 800 B.C.E.; later, the Romans and other cultures in the region adapted it to their own languages. Today, most of the peoples of the Western world and Middle East write in an alphabet directly or indirectly based on that of the Phoenicians.

DECLINE

The Phoenician trade empire flourished for some 400 years, but political developments in the region led to its gradual demise. In the ninth century B.C.E., the Assyrian Empire in northern Mesopotamia began to expand west toward the Mediterranean. One by one, the Phoenician cities along the coast fell. Only Tyre remained free, largely due to its defensive fleet. By the eighth century B.C.E., the Greeks had expanded their own trade activities and captured markets in the Aegean and Mediterranean seas formerly dominated by the Phoenicians.

The Persians conquered the remaining Phoenician city-states by 538 B.C.E. Phoenicia slowly declined

as a commercial center under the Persians, a land-based empire that had little naval or maritime tradition. The city of Sidon did prosper under the Persians, but that was because it was used as a launching point for Persian invasions of Egypt and Greece. Alexander III, the Great (r. 336–323 B.C.E.), who invaded Phoenicia in 333 B.C.E., was more interested in promoting Greek commercial trade, and Phoenicia's importance as a trading center declined rapidly thereafter. Carthage alone continued to prosper until it was defeated by Rome in the Second Punic War (218–202 B.C.E.) and destroyed by Rome in the Third Punic War (149–146 B.C.E.).

See also: Assyria; Hittites; Language and Writing.

FURTHER READING

Aubet, Maria Eugenia. *The Phoenicians and the West: Politics, Colonies, and Trade*. Translated by Mary Turton. 2nd ed. New York: Cambridge University Press, 2001.

Casson, Lionel. *The Ancient Mariners: Seafarers and Sea Fighters of the Mediterranean in Ancient Times*. 2nd ed. Princeton, NJ: Princeton University Press, 1991.

Rawlinson, George. *Phoenicia: History of a Civilization*. New York: Tauris, 2005.

Sandars, N.K. *The Sea Peoples: Warriors of the Ancient Mediterranean*. London: Thames and Hudson, 1978.

Religion

Ancient Southwest Asia and the Near East was not only the birthplace of material advances such as writing, the wheel, and the first cities, but it also produced the world's earliest formal religions. Some of these faiths, including the **polytheistic** religions of ancient Sumer, Babylonia, and Assyria, were derived from and retained many aspects of earlier **animistic** religions. Other religions, including Zoroastrianism, Judaism, Christianity, and Islam, were **monotheistic** faiths that acknowledged the presence of a single god said to have created and ruled over the universe.

DEITIES IN NATURE

The hunter-gatherers who inhabited Mesopotamia before the development of agriculture encountered nature in an intimate and immediate manner. Survival must have seemed to them a daily challenge leveled by divine forces against humankind. As a result, early religions in Southwest Asia and the Near East tended to be animistic, centered around the belief that spirits inhabited natural objects, such as streams, trees, or animals.

As hunting and gathering gave way to a settled agricultural lifestyle, the concept of spirits inhabiting natural objects was gradually replaced by the notion of gods and goddesses associated with specific aspects of nature or human behavior. These included deities of the sun, wind, water, reproduction, love, and war. The early civilizations of Mesopotamia, including those of the Akkadians, Babylonians, and Assyrians, worshipped the same basic **pantheon** of gods. Among the most important of these were An, god of the heavens; Ki, the earth goddess; Enlil, god of the air; Enki, god of the deep waters; Nanna, god of the moon; Utu, god of the sun and justice; and Inanna, goddess of love and war.

PUBLIC AND PRIVATE RITUALS

Because the Mesopotamian deities were thought to control the forces of nature, damaging natural events, such as thunderstorms or floods, were attributed to the anger of the gods. Ancient Mesopotamians thus considered it essential that all people find a way to appease the gods in order to protect the community from divine wrath. This was accomplished through the performance of public and private rituals.

Public rituals in early Mesopotamian cities often focused on the worship of the city's patron god. For example, Enlil was the patron god of the city of Nippur, while Nanna was the patron goddess of Ur. The most important structure in each **city-state**, the *ziggurat*, was dedicated to the patron deity. The ziggurat was a massive building consisting of a series

of levels, each one smaller than the one below it. At the top of the ziggurat stood a temple dedicated to the patron deity. Daily sacrifices were conducted at the temple to honor and placate the deity. Although built by residents of the community, the ziggurat and altar areas were sacred spaces, and only priests were allowed to ascend to the temple to offer sacrifices.

Every Mesopotamian house had a separate area containing a shrine to household gods who were believed to watch over the home. It also contained a space for burying deceased family members. Ancient Mesopotamians believed that the spirits of dead family members stayed close to their families. It was the family's responsibility to feed the dead and provide them with whatever they might need in the afterlife. In return, the dead were to look after and protect the family's interests.

MONOTHEISTIC FAITHS

In contrast to animistic and nature-based polytheistic religions, Mesopotamia also produced the world's first and most widely adopted monotheistic faiths. These religions professed the existence of a single, all-powerful god whose power was not limited to influence over a single aspect of nature. They were based on the ethical struggle between good and evil rather than on the physical struggle for survival in an uncertain climate.

Zoroastrianism

The earliest of the region's monotheistic faiths was Zoroastrianism, which takes its name from the prophet Zoroaster (Zarathustra), who lived sometime between the eighteenth and sixth centuries B.C.E. It is based on the eternal struggle between Ahura Mazda, the god of light and creation, and Angra Mainyu, or Ahriman, the spirit of evil. Zoroastrianism preaches the existence of an eternal law, or order, known as *asha*, which is in a constant struggle with *druj*—interpreted variously as decay, disorder, or nothingness.

Humans, who actively participate in this struggle, have a duty to promote and defend asha. They do this by following the central precepts of Zoroastrianism, which include treating all people equally, regardless of gender or race; respecting all living things; hard work; charity; and loyalty to family and friends. The ideas of asha and druj are not perfectly equivalent to the notions of good and evil. However, the qualities that promote asha are those that the other major monotheistic religions typically associate with goodness and morality.

Zoroastrianism was widely practiced in the Persian Empire, and its impact on Persian foreign policy is clear in the reigns of Cyrus II, the Great (r. ca. 559–ca. 530 B.C.E.), Cambyses III (r. ca. 530–522 B.C.E.), and Darius I, the Great (r. 522–486 B.C.E), who practiced religious tolerance toward conquered peoples. After Cyrus defeated the Babylonians in 539 B.C.E., he allowed the Jews, who had been forced into exile by the Babylonians in 586 B.C.E., to return to their homes and to rebuild their temple in Jerusalem.

Judaism

Judaism traces its roots to southern Mesopotamia around 1800 B.C.E. According to the Hebrew Bible, or Old Testament, the **patriarch** Abraham, who lived in the Mesopotamian city-state of Ur, established a covenant with the supreme deity, Yahweh. Yahweh promised to make the Jews his chosen people if they accepted him as God, complied with his will, and bore the sign of the covenant, male circumcision.

The biblical account states that Abraham led the Jews out of Ur into Canaan, the land he promised them as part of his covenant. A famine later caused the Jews to seek refuge in Egypt, where they lived peacefully until a pharaoh who was hostile to the immigrants enslaved them. However, Moses, a Jew raised as a member of the pharaoh's family, emerged as a champion of Jewish freedom. Moses asked Yahweh to bring a series of plagues on Egypt, until the pharaoh finally agreed to free the Jews. The biblical book of Exodus describes the Jewish captivity in Egypt and the Jews' subsequent quest to return to Canaan.

The first five books of the Hebrew Bible, the scripture known as the Torah, set down the basic tenets of Judaism. At its core are the laws of ethical behavior called the Ten Commandments, which Jews believe Yahweh presented to the Hebrew patriarch and prophet Moses. The commandments

The Dome of the Rock, the mosque in Jerusalem believed to be the place where the prophet Muhammad ascended to heaven to receive the prayers of Islam from God, is one of the holiest sites for Muslims. The Mount of Olives, seen in the background, is equally sacred to Christians as the site where Roman soldiers are said to have seized Jesus of Nazareth before crucifying him. (Rohan/Stone/Getty Images)

condemn unethical actions that harm others—for example, murder, theft, adultery, and false witness—as well as more private thoughts or actions such as coveting another person's possessions or dishonoring one's parents. In addition to the Ten Commandments, the Torah contains an extensive set of laws pertaining to specifics of religious observances, marriage and family relations, social customs, and dietary practices that govern the actions of Jews.

The remainder of the Hebrew scriptures tell the history of the Kingdom of Israel, established by the Jews upon their return to Canaan. They also include books containing poetry, the teachings of prophets, the actions of wise leaders known as judges, and other writings intended for moral instruction, such as the Book of Job. This book describes how Yahweh severely tests the faith of a devout believer, continually placing him in a series of seemingly hopeless predicaments. These later books do not have the same importance as the Torah, but Jews nonetheless hold them in great reverence.

While the polytheistic faiths of the region easily accommodated other gods within their pantheons, Judaism refused to acknowledge the existence of any god except Yahweh. This became a source of ongoing conflict between the Hebrews and the imperial powers of ancient Southwest Asia. The Babylonian Exile that was ended by Cyrus II was the result of the Hebrews' refusal to worship Marduk, the principal Babylonian deity. Three times during the first and second centuries C.E., the Hebrews revolted against the Roman Empire, which allowed the practice of local religion but also required yearly sacrifices to the Roman gods. After putting down the third revolt in C.E. 135, the Romans destroyed the rebuilt Temple in Jerusalem and forced most of the Jewish population into exile, an event known as

RELIGIOUS EXPRESSION IN THE NEAR EAST AND SOUTHWEST ASIA

CA. 1800 B.C.E. Abraham and Sarah, the ancestors of the Jews, or people of Israel, said to have lived in the Mesopotamian city-state of Ur, according to the Hebrew Bible

CA. 1700–500 B.C.E. Prophet Zarathustra founds Zoroastrian faith in Persia (modern-day Iran)

CA. 1250 B.C.E. Prophet Moses, sometimes thought of as "founder" said to have written the Torah, or first five books of the Hebrew Bible

586 B.C.E. Babylonian Exile begins as Jews from Kingdom of Judah are dispersed throughout the Babylonian Empire for refusal to worship Babylonian gods

CA. 538 B.C.E. Babylonian captivity ends after Persian king Cyrus II, the Great (r. ca 559–ca. 530 B.C.E.), conquers the Babylonian Empire and allows Jews to return home to southern kingdom of Judah

CA. C.E. 27–30 Jesus of Nazareth preaches ideas that form basis of the Christian religion

C.E. 610–613 The prophet Muhammad introduces the Islamic faith in Arabian Peninsula

C.E. 632 Death of the prophet Muhammad

the **Diaspora**. Jews would not return in large numbers to the region for more than 1,800 years.

Christianity

In about C.E. 27, an itinerant preacher named Jesus of Nazareth (ca. 4 B.C.E.–ca. C.E. 30) established a popular ministry in the Roman province of Judea (modern-day Israel), calling for a return to the basic ethical concepts of Judaism. Jesus claimed the Jewish law as the basis for his teachings, but he stated that two commandments were greater than all the others: to love God with all one's heart and mind and to love others as oneself. He was contemptuous of those who followed the outward rituals of the Jewish faith while living a life that betrayed its underlying principles of communal responsibility.

Jesus saved some of his harshest condemnations for Jewish religious leaders, calling them "hypocrites" for not emphasizing communal responsibility for its poorest members. He believed that many leaders cared little about the Jewish people and were chiefly concerned with maintaining the power and wealth they enjoyed. At the same time, Jesus preached that the poor, meek, and powerless were God's true chosen people. The wealthy and powerful, he argued, had received their reward in this world; those who suffered but still remained faithful to Yahweh would enter paradise in the next world.

According to the Gospels, four texts written 30 to 60 years after Jesus's death that describe his life and teachings, Jesus also performed several miracles. These purportedly included restoring sight to the blind and even raising a man from the dead. Jesus's reputation grew to the point that many of his followers came to believe that he was the Messiah, a savior promised in the Hebrew scriptures, who would free the Jewish people from foreign domination. To many of the faithful, Jesus was not simply the messiah, but the son of God.

Jewish religious leaders were outraged at such claims, which they saw not only as blasphemy but also as a challenge to their authority. When Jesus arrived in Jerusalem for the Passover celebration in about the year C.E. 30, Roman officials, fearing a clash between the Jewish authorities and Jesus's followers, arrested Jesus. The Roman governor, Pontius Pilate, subsequently sentenced Jesus to death by crucifixion.

To the chagrin of many religious and government leaders, Jesus' death seemed only to increase his popularity and status. Three days after the execution, Jesus' followers claimed that he rose from the dead. Those who embraced this idea began actively to spread Jesus' teachings first throughout Judea and then Asia Minor. Over time, a new religion, Christianity, emerged from the Jewish roots of Jesus' teachings. Although Christianity retained the underlying ethical and moral teachings of Judaism, it abandoned many of the faith's traditional dietary laws and practices, including circumcision. This decision, promoted by the early church father Saint Paul, made the faith more acceptable and accessible to non-Jews, known as Gentiles.

By the third century C.E., Christianity had penetrated to virtually every corner of the Roman Empire. It gained a large following, particularly among the poor and among marginalized members of society, including many women. However, like the Jews, Christians refused to acknowledge or worship any other god, which aroused suspicion and hostility among pagan Romans. Several Roman emperors took advantage of anti-Christian sympathies to blame Christians for imperial economic and social misfortunes. Nero used them as scapegoats, claiming that Christians set the fire that destroyed much of Rome in C.E. 64, and he had many publicly put to death on that charge.

The accession of Emperor Constantine I (r. C.E. 306–337) marked a turning point in the fortunes of Christianity. Constantine, who was emperor of the eastern portion of the Roman Empire, claimed sole possession of the throne by defeating the western emperor, Maxentius, at the Battle of the Milvian Bridge in C.E. 306. The night before the battle, Constantine reported seeing a vision of a cross accompanied by the words "In hoc signo vinces" ("In this sign you shall conquer"). He took that as a sign that the Christian God would lead him to victory the next day. His subsequent triumph left Constantine sole emperor of Rome, and ensured the survival of Christianity. In C.E. 313, Constantine passed the Edict of Milan, which declared official toleration of all religions, including Christianity, in the empire.

Freed from state persecution, the Christian faith grew rapidly into an institution whose influence replaced that of the failing Roman emperors. By the time the western half of the Roman Empire fell in the late fifth century C.E., the Catholic Christian Church based on Rome was the most powerful institution in Europe. However, the church itself was experiencing internal disputes over **doctrine** and leadership. The bishop of Rome considered himself the spiritual leader of all Christendom, but

TURNING POINT

The Unifying Power of Islam

Islam was more than a religion. It was a powerful political force that united the quarrelling tribes of Arabia and enabled them to spread their beliefs throughout Southwest Asia. The world in which Islam's founder Muhammad (C.E. 570–632) lived was one of distrust and social inequality. People fled to the cities for protection against nomadic bandits, but once there, they were exploited by the wealthy and **aristocratic** urban elite. Muhammad felt the need for something to bring unity, comfort, and purpose to the Arab people. Islam represented this unifying force. It required Muslims to put tribal allegiances aside and to form a community, or *ummah*, where race and social class did not matter. Tolerance and compromise were to replace the dominance of one element of society over another.

As Arab armies conquered most of Southwest Asia, North Africa, and Iberia (modern-day Spain and Portugal) in the seventh and eighth centuries C.E., they came to rule over a diverse group of peoples. Arab soldiers and merchants brought Islamic law, religious beliefs, and social customs to these conquered lands, where they spread rapidly. Shared Islamic culture, including the common use of the Arabic language, facilitated trade, communication, and travel throughout the Muslim world, producing perhaps the most literate and scientifically advanced society of its day.

many bishops in the surviving Eastern Roman Empire considered all bishops to have equal authority over their local congregations. This power struggle aggravated existing differences in ritual and certain tenets of the faith, and led eventually to a break, or schism, between the Roman Catholic Church and the Eastern Orthodox Church in C.E. 1054.

Islam

Islam originated in the Arabian Peninsula between C.E. 610 and 613, at a time when the region was torn by tribal rivalries and warfare between the nomadic communities and those living in cities. The tribal leaders who ruled Arabia pitted different social factions—rich and poor, city-dwellers and nomads—against one another to weaken potential rivals and maintain their hold on power. They also ignored the plight of poorer and weaker members of society who often were exploited and mistreated.

The prophet Muhammad (C.E. 570–632), a successful Arab merchant living in the city of Mecca, was greatly troubled by the violence and greed that surrounded him. In C.E. 610, Muhammad had a religious experience in which he said that Allah (the Arabic name for God) revealed to him the teachings that eventually developed into Islam.

Islam is based on five principles, or pillars. The first and most basic of these is the *shahadah*, a declaration that that there is only one God and that Muhammad is God's messenger. The other pillars include *salat*, the obligation to pray five times a day and a sixth prayer on Fridays; *zakat*, or alms-giving; *sawm*, or fasting from sunup to sundown during the month of Ramadan; and *hajj*, the obligation to make a pilgrimage to Mecca at least once during one's lifetime. Islam's ethical principles focus on a concern for just treatment of others, as well as submission to Allah's will. The very word *Islam* means "surrender" or "submission" in Arabic.

Islamic precepts closely parallel the beliefs of Judaism and Christianity, which Muslims see as predecessors to Islam in a single great prophetic tradition. Muslims believe that Muhammad was the last of a line of prophets that included the Hebrew patriarchs Abraham and Moses, as well as Jesus of Nazareth. Many of the stories that appear in Hebrew scriptures and Christian Gospels are also included in variant versions in the Muslim holy book, the Koran. Muslims claim that the Jews and Christians did not completely comprehend the revealed word of Allah, which accounts for the differences in the three sources. Muslims regard Judaism and Christianity as related religious traditions to be respected and tolerated. By contrast, Islam condemns all polytheistic and animistic religions as forms of idolatry, or idol worship.

Muhammad earned the anger of the Arab tribal leaders by publicly criticizing their corruption, cruelty, and indifference. By C.E. 622, hostility toward Muhammad in Mecca (including reported attempts on his life), forced him to move to the city of Yathrib (now Medina). There he became a leading figure by reconciling two rival tribal factions and uniting them under the banner of Islam. Within two years, Muhammad and his followers in Medina were at war with the tribal leaders in Mecca. After years of war interrupted by a brief and ultimately suspended truce, Muhammad conquered Mecca in C.E. 630. Ultimately he was able to unite the Arabian Peninsula under Muslim rule thus marking the beginning of a dramatic expansion of the faith.

In the decades following Muhammad's death in C.E. 632, Muslim armies and merchants under the Umayyad Dynasty carried Islam throughout Southwest Asia and the Near East, eastward into what is now Pakistan and India, and west across North Africa and into Iberia (modern-day Spain and Portugal). In C.E. 750, however, the rival Abbasid Dynasty overthrew Umayyad rule everywhere except Iberia. The Abbasids ruled over the so-called Dar-al-Islam ("community of Islam") until falling to Mongol invaders in C.E. 1258. As it happened, Islam proved more resilient than the Mongols, most of whom settled in the newly conquered lands and over time converted to the Muslim faith.

The Islamic state founded by Muhammad grew into the last, and largest, great empire of ancient Southwest Asia and the Near East. For nearly 1,200 years, Islam was the dominant religious, cultural, political, and military force in the region. Although its political and military clout waned steadily after the seventeenth century C.E., Islam remains to this day the region's most significant and enduring cultural and religious influence.

See also: Art and Architecture; Assyria; Babylonia; Christianity; Darius I, the Great; Islam; Jews and Judaism; Mesopotamia; Sumer; Ur; Zoroastrianism.

FURTHER READING

Armstrong, Karen. *A History of God: The 4,000-Year Quest of Judaism, Christianity and Islam*. New York: Ballantine Books, 1994.

Black, Jeremy, and Anthony Green. *Gods, Demons, and Symbols of Ancient Mesopotamia: An Illustrated Dictionary*. Austin: University of Texas Press, 1992.

Reichardt, E. Noel. *The Relation Between Early Religions and Civilization*. Kila, MT: Kessenger, 2005.

Rochberg, Francesca. *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge, UK: Cambridge University Press, 2004.

Sawyer, John F.A. *Prophecy and the Biblical Prophets*. New York: Oxford University Press, 1993.

Smith, Houston. *The World's Religions: Our Great Wisdom Traditions*. San Francisco: HarperSanFrancisco, 1991.

Sargon the Great *See* Babylonia; Sumer.

Scythians

Fierce nomadic tribe of horsemen that lived in the lands north of the Black and Caspian seas from the seventh through first centuries B.C.E. The Danube River served as an unofficial western border of the Scythian domain, and the Don River marked the easternmost extent of their territory. The Scythians are noted for being among the first people to domesticate the horse.

The Scythians' military skills and tactics made them famous in an age of great armies. Although they rode horses with no saddles or stirrups, their archers were able to turn and shoot at those behind them while riding at full gallop. Scythian women often fought alongside the men and may have been the basis for the Greek myth of the Amazons, a race of fierce female warriors. As nomads, the Scythians were uninterested in conquering and holding new territories. Instead, they fought invaders to defend tribal honor or to protect their ancestral lands. This greatly influenced their fighting style, which depended more on hit-and-run raids than extended set-piece battles. When the Persian king Darius I, the Great (r. 522–486 B.C.E.), invaded Scythia in 514 B.C.E., he was frustrated by the Scythians' refusal to meet his army in battle.

Scythian art and religion reflect Scythians' intimate relationship with and reverence for nature. Their jewelry and other **artifacts** featured stylized representations of animals including the horse, stag, bear, wolf, eagle, and fish. The Scythians practiced an **animistic** religion, in which holy men known as shamans intervened between the spirit world and the world of the living. Amulets meant to ward off evil provide evidence that the Scythians believed in magic and witchcraft.

Because the Scythians were illiterate, what is known of their history primarily comes from two kinds of sources: archeological evidence found in tombs located in modern-day Russia and Kazakhstan, and Persian and Greek sources, including the fifth-century B.C.E. Greek historian Herodotus. With their mastery of horseback warfare, the Scythians controlled the steppes of Central Asia from the fifth through the third centuries B.C.E.

During this time, the Scythians divided into two groups. One group settled in the area of modern-day Ukraine and the other occupied the Crimean Peninsula. Both ultimately abandoned the nomadic lifestyle, taking up farming and herding, and profiting from the slave trade between northern Greece and the Black Sea. Adopting a settled lifestyle may have weakened the Scythians. In

LINK TO PLACE

Scythian Cultures in Central Asia

Most modern scholars base their understanding of the origin of the Scythians on the fifth-century B.C.E. writings of the Greek historian Herodotus. His account gives several versions of Scythian origins. The one Herodotus believed, and which is widely accepted today, claims that the Scythians originally inhabited Central Asia but were pushed out as a result of conflict with a nomadic steppe tribe called the Massagetae. These rivals of the Scythians were one of a number of tribes in the region described by Herodotus and other **classical** writers. Because the tribes shared a common nomadic lifestyle, scholars often refer to them as "Scythian cultures."

The Massagetae of Iran and the Scythians shared many common customs——from their dress to their reliance on their herds and their skill at working with gold. Both the Massagetae and Scyhtians practiced **monogamy**, but, unlike the Scythians, all Massagetae wives were held in common by the tribe.

The Issedones, another of the so-called Scythian cultures, also figure in one of the myths of Scythian origins. According to that legend, it was the Issedones, who lived east of the Scythians, who forced the Scythians out of Central Asia. Herodotus reported that the Issedones, like the Massagetae, held their wives in common. Similar customs regarding marriage existed until quite recently in parts of Tibet, suggesting that country as a possible location for the Issedones' homeland. The Issedones also practiced a custom that would strike most people today as bizarre. They killed elderly male members of the tribe and held a ritual feast at which the victim's family ate his flesh. Afterwards, they gilded his skull (covered it with a thin coating of goal) and revered it as a shrine.

the third century B.C.E., groups including the Celts in the Balkans and the Sarmatians in Russia took over the areas formerly dominated by the Scythians. By the first century B.C.E., the Scythians had disappeared.

See also: Darius I, the Great; Persia.

FURTHER READING

Reeder, Ellen, and Michael Treister. *Scythian Gold*. New York: Abrams, 1989.

Rolle, Renate. *The World of the Scythians*. Berkeley: University of California Press, 1989.

Trippett, Frank. *The First Horsemen*. New York: Time-Life Books, 1979.

Slavery

Slavery was widespread in ancient Mesopotamia, Persia, and Egypt, where those enslaved performed domestic and agricultural tasks without compensation and also worked on major public building projects. However, slavery was not common in the Indus River valley, where other forms of labor control, such as serfdom (by which peasants are bound to a specific piece of land), ensured the presence of an agricultural workforce.

Slavery was a well-established practice by the time the first Sumerian cities arose in southern Mesopotamia in the late fourth millennium B.C.E. Warfare was the earliest source of slaves in ancient Sumer; soldiers and citizens captured in warfare were enslaved by the state. The Sumerian name for

a female slave was "mountain girl," while a male slave was a "mountain man." Given the flat topography of southern Mesopotamia, these terms suggest that foreigners made up the bulk of the slave population. Prisoners of war continued to comprise a large percentage of the slaves of later societies such as those of the Babylonians and Assyrians.

Not all slaves, however, came from outside the host society. In most ancient Mesopotamian societies, there were several ways an individual might become enslaved. A man who could not pay his debts might give his wife or children as slaves to his creditors. In some instances, a debtor with no family would make himself the slave of his creditor to work off the amount owed. The law code established by the Babylonian king Hammurabi (r. 1792–1750 B.C.E.) established slavery as a punishment for criminal offenses, with the money from a person's sale going to compensate the victims. Finally, persons born to slaves were themselves slaves.

Although slaves were legally considered property and typically had no rights, they appear to have been relatively well treated. In Persia and Babylon, educated slaves often became tutors to their owner's children, and many achieved positions of significant authority and responsibility. Under Jewish law, slaves had limited rights and were not to be injured or killed. Among Muslims, any slave who converted to Islam had to be immediately set free. Owners in all of these cultures sometimes granted freedom to favorite slaves in their wills.

Slaves were the property of their owner, and only their owner could set them free. In Mesopotamia, runaways were severely punished, as was anyone who aided them. The Code of Hammurabi clearly stated that the Babylonian government would execute anyone who tried to free another man's slave. In addition, anyone who injured or killed a slave owed the owner compensation for damage to or loss of property.

See also: Hammurabi; Islam; Jews and Judaism; Zoroastrianism.

FURTHER READING

Chirichigno, Gregory C. *Debt-Slavery in Israel and the Ancient Near East*. Sheffield, UK: JSOT Press, 1993.

Meltzer, Milton. *All Times, All Peoples: A World History of Slavery*. New York: Harper and Row, 1980.

Scheidel, Walter. *Slavery in the Ancient World*. Oxford: Blackwell, 2006.

Society

The nature of society—or the institutions that distinguish one group of people from another—in the Near East and Southwestern Asia was shaped by the transition from a strictly nomadic to a largely agricultural existence. Prior to the invention of agriculture around 8000 B.C.E., the peoples of the region organized themselves into tribes with loose social structures bound by blood ties. The advent of settled farming communities led to the development of urban societies, with much greater social **stratification**, where survival depended upon mutual cooperation.

TRIBAL SOCIETY

Nomadic groups in Southwest Asia organized themselves into tribes. The most notable examples of tribal groups in the ancient period include the Scythians, the Jews before the Babylonian Captivity (ca. 586–ca. 538 B.C.E.), and pre-Islamic Arabs (prior to C.E. 613). While each of these groups had a unique history, they shared certain elements of their social organization.

Because these peoples were **pastoral** nomads, they organized themselves into small groups that could be supported on the limited natural resources the people could gather. Small tribal groups were united by ties of blood and kinship. For example, by 1700 B.C.E., the Jews had divided into 12 tribes, each

said to be descendents of the sons of Jacob, grandson of the **patriarch** Abraham. In this society, the chieftains were military and judicial leaders, acting as the final voice in tribal disputes, and Jewish leaders claimed authority based on their military prowess.

Women in Tribal Society

In tribal societies, women tended to be treated more as equals than they were in later urban-based societies. They helped look after the animals each group raised and fought side by side with the men. Scythian women, for example, were noted for their skills in battle. Jewish law dictated that men and women were to be treated equally. Jewish women also served as prophets and queens, providing examples of moral leadership and group loyalty.

In pre-Islamic Arabia, by contrast, women had fewer rights. Women supplied labor, but men made all the decisions for them. If a woman was unmarried, she was under the authority of her father; if married, she submitted to her husband; when widowed, she was subordinate to her eldest son. Women were not permitted to inherit property and were dependent upon family members for support. This ensured that any accumulated wealth remained within the husband's family and was not taken by the woman into a second marriage.

Honor

Honor, an important guiding principle in tribal groups, is based on the concepts of honesty and integrity. For example, in Jewish and Arabian tribes, honor required anyone who asked for shelter to be treated as a guest and protected from harm. This concept is exemplified by the Biblical story of Lot, who refused to turn over his guests to the angry citizens of Sodom. Familial codes of honor also required that any violence done to a family member be revenged by the tribe against the offender and his family. Honor also extended to the grave. When a Scythian chieftain died, it was considered an honor for his warriors and his favorite wife or concubine to drink poison so that they could serve him in the afterlife.

The concept of honor was particularly important in regard to the tribe's women. A woman's honor was tied to her sexual modesty. She was expected to remain a virgin until married, and once married she was to avoid contact with men other than her husband. This was meant to ensure that she would not be sexually promiscuous, give birth to a child out of wedlock, or use her husband's resources to raise another man's child. In pre-Islamic Arab communities, a woman who had been raped or found guilty of adultery would be killed by her family to preserve their honor, as would any illegitimate child to whom she gave birth.

URBAN SOCIETY

The transition from a nomadic to a sedentary, or settled, lifestyle led to much more complex social organization. The invention of agriculture allowed societies to increase food production while using fewer human resources. This freed up a segment of the population to pursue more specialized activities such as pottery, weaving, and metalwork. The evolution of more complex societies also led to the development of ruling and priestly classes to organize and guide group efforts. Over time, separate social classes based on control of wealth and political power emerged in the civilizations of Southwest Asia.

Social Classes

The Sumerians, who established the world's first true civilization in the late fourth millennium B.C.E., developed a **hierarchical** society consisting of three basic classes: nobles, commoners, and slaves. Each of these groups was further divided into sub-classes.

The king was the most important of the nobles. His power was based on his military leadership, his role as human representative of the chief deity, and his membership in the ruling dynasty. Kings made and enforced laws, oversaw building projects, and led armies into battle. Mesopotamian kings frequently participated in religious rituals, and art from early Mesopotamia often depicts kings as standing at the side of the gods. For example, the code of laws created by the Babylonian king Hammurabi (r. 1792–1750 B.C.E.), dating to about 1786 B.C.E., was chiseled into a stone slab that bore an image of Hammurabi receiving the laws from the god Shamash.

From ancient Mesopotamia, the cylinder seal and imprint shown here are attributed to the cult of the gods Marduk and Nabu. Seals were a principal form of identification in the ancient Near East and Southwest Asia. Each seal contained a unique image that its owner imprinted in wet clay on documents to verify their originality and authenticity. (© Erich Lessing/Art Resource, NY)

The king was assisted generally by two groups: a council of elders and the priests of the dominant deity. The elders were men with experience in both military and administrative matters. For example, such a council was referred to in the Mesopotamian creation story, the *Epic of Gilgamesh*. The priesthood was charged with making certain that the king's actions complied with divine will. The priests helped the king understand messages sent to him in dreams, sought out omens or portents that would support or guide the king, and prayed for him. Beneath the king and his advisors was the royal bureaucracy: judges, tax collectors, and scribes.

In Sumerian society, 90 percent of the population was involved in growing food, raising animals, or producing finished goods such as hides, pottery, metalwork, and **textiles**. This work was done primarily by free commoners. Farmers were the most respected group of commoners, because of their role in supplying food to the population. Merchants, on the other hand, while necessary to conduct commerce and increase the wealth of society, were less well respected. They were seen as making a living not by the sweat of their brow but on the efforts of others who actually produced what the merchants sold.

Slaves formed the lowest class of Mesopotamian society. In ancient Mesopotamia, slavery was not based on race or ethnicity; rather it was typically a consequence of economic or political misfortune. An individual might become enslaved after being captured in war, breaking the law, or accumulating debt that he or she was unable to pay. A person could sell himself into debt-slavery in order to pay off substantial sums owed to creditors. Once the debt was paid, the individual was freed from bondage. Slaves generally worked in the fields, tended animals, and fought in the army.

Concern for maintenance of the social order was outlined in many Mesopotamian political and religious documents, but nowhere as clearly in the Code of Hammurabi. Under the code, punishment was based on the social status of the victim and the assailant. Individuals of lower status typically received more severe punishments for legal trans-

LINK TO PLACE

Carpets in Traditional Societies

The Near East and Southwest Asia long has been renowned for the beautiful and intricate woven carpets produced by regional **artisans**. When Cyrus II, the Great, King of Persia (r. ca. 559–ca. 530 B.C.E.), conquered Babylon in 539 B.C.E., intricate fine wool and cotton rugs were part of the spoils of war. In fact, Cyrus, who made the Persian Empire the center of the art of carpet weaving, was buried with carpets made with golden threads.

The oldest surviving rug from the region is a six-foot-square (1.8-m) piece that dates to about 300 B.C.E. Its design, which depicts men on horseback and walking alongside their horses, mimics themes carved in stone at the Persian royal palace at Persepolis. Carpets with similar scenes are mentioned in the *Avesta*, the second-century B.C.E. collection of Zoroastrian sacred texts. Vivid images of flowers and gardens were also popular themes in the arid landscape of the region.

Islam significantly influenced the patterns used in these carpets. Sunni Muslims took seriously the Koran's prohibition against creating idols. Thus, images of humans, animals, or even plants, which might be taken for gods, were forbidden in Sunni Muslim art. As a result, Sunni carpet designs featured geometric patterns and passages from the Koran in Arabic script. Shi'a Muslims were less strict, allowing the use of floral images. However, humans and animals were still prohibited, and geometric patterns also tended to dominate Shi'a carpet designs. Despite geographic separation, similar designs have been unearthed from different societies across the region.

gressions and were entitled to smaller compensation when wronged than were higher-status individuals. For example, lower-class offenders were usually executed for harming someone of a higher social class. By contrast, a higher-status person who harmed one of lower status might be ordered to compensate the victim's family monetarily. The law provided special protection for women and children who were considered to be the weakest members of Mesopotamian society, being unable to physically protect themselves and having no direct access to the legal system.

Women

Regardless of social status, women had little power and influence in Mesopotamian society. Fathers chose whom their daughters would marry. Husbands decided how to handle property that their wives brought into a marriage. Sons decided the fate of their widowed mothers. By contrast, women could not own property. They worked in and around the house, cooking, cleaning, and raising food for the family's table. They raised the children and maintained the offerings made to the spirits of deceased family members.

This is not to suggest that women played no public role in society. They often participated in occupations that derived from their duties at home. For example, women brewed beer for household consumption, and often sold the surplus in public or to a tavern. Women who worked in the fields also sold food raised on the family farm in public stalls. However, working in public brought into question a woman's moral behavior and made her vulnerable to physical attack. Hammurabi's law code severely punished men who raped, attacked, or stole from a woman, and death was ordered for any person who raped a pregnant woman.

TRADE AND COMMERCE

Urban societies were united not by the blood ties that bound the tribal societies but by their mutual pursuit of economic prosperity. That prosperity typically was based on trade. The civilizations of ancient Southwest Asia fought to gain access to natural resources such as the iron, gold, and copper deposits of Anatolia (modern-day Turkey) and Egypt and the cedar forests of modern-day Lebanon and Cyprus. They also competed for access to foreign markets in which to sell their goods.

The importance of trade drove the Phoenicians to dominate shipping on the Mediterranean Sea from about 1200 to 800 B.C.E. and encouraged the Lydians of Anatolia to mint the first coins in the seventh century B.C.E. The Macedonian king Alexander III, the Great (r. 336–323 B.C.E.), invaded Persia in 330 B.C.E. not just for military glory but also to add Persia's wealth and markets to his growing empire.

Trade also encouraged the social and cultural exchange that spread new ideas, innovations, and religious beliefs throughout the region. In this way, trade helped to provide a common ground for cooperation and understanding between societies in a region that was often beset by war and conflict.

See also: Hammurabi; Lydians; Mesopotamia; Slavery; Technology and Inventions.

FURTHER READING

Bahrani, Zainab. *Women of Babylon*. New York: Routledge, 2001.

Cernenko, E.V. *Scythians, 700–300 B.C.* London: Osprey, 1983.

Haldon, John. *Warfare, State, and Society in the Byzantine World, 565–1204*. London: UCL Press, 1999.

Lapidus, Ira M. *A History of Islamic Societies*. Cambridge: Cambridge University Press, 2002.

Sumer

The world's earliest settled civilization, which arose in southern Mesopotamia, dating to the mid-sixth millennium B.C.E. By the late fourth millennium, the world's first urban centers appeared there.

Archeologists believe that the earliest Sumerians were a farming people who inhabited northern Mesopotamia before moving south as early as 5200 B.C.E. The region's arid climate and limited water resources required the development of effective irrigation systems to sustain an agricultural lifestyle. Creating and maintaining such systems required a high degree of social organization that eventually enabled the growth of increasingly larger permanent settlements.

The surplus food generated by these settlements permitted a portion of the population to devote itself to duties other than food production. Ruling and priestly classes emerged to organize and direct labor, and **artisans** such as pottery makers, weavers, and metalsmiths developed specialized skills to produce luxury and trade goods. By the mid-fifth millennium B.C.E., Sumerians had developed a flourishing trade along the Tigris and Euphrates rivers. Some time before 3000 B.C.E., the wealth generated by trade enabled local rulers to found the first cities based around central temple complexes.

GOVERNMENT, RELIGION, AND SOCIETY

The Sumerian civilization consisted of a dozen **city-states** located between the Tigris and Euphrates rivers, the largest of which were Ur, Uruk, Lagash, and Kish. A city-state was self-governing city, usually guarded by defensive walls, and the agricultural lands surrounding it. The most important structure in a Sumerian city was the *ziggurat*, a monumental building atop which was located a temple dedicated to the city's patron god. The patron god of Ur, for example, was the moon god, Nanna. A statue of the god, who was believed to look after the welfare of the city, was located in the temple.

Sumerian society was highly organized and **hierarchical**. At the top was the king who served as both the head of the government and the commander of the military. Although accepted by the people as the representative of the city's patron god, the king was not considered divine. The king was advised by priests who served the patron god, and by a council of elders. Approximately 10 percent of

the city's population worked as merchants or produced goods such as pottery, leather goods, and **textiles** for local consumption as well as for trade. Ninety percent of the population worked to produce food. Slavery was common, and foreigners captured in warfare worked in a wide range of menial tasks, particularly agriculture and construction.

ENDURING CONTRIBUTIONS

The Sumerians made some of the most significant contributions to early human civilization. In the fifth century B.C.E., the Sumerians are believed to have invented the wheel, which they used not only for transportation (by the mid-fourth millennium B.C.E.), but also for use in making pottery. Before the invention of the wheel, potters generally created their pieces by coiling strips of wet clay and stacking the coiled strips atop one another. This technique limited the size and shapes of pots that could be produced. The pottery wheel allowed artisans to work with larger lumps of clay that could be rotated on the wheel and shaped with both hands. This enabled them to form larger pots with thinner, yet sturdier, walls in a variety of shapes and sizes.

Around 3100 B.C.E., the Sumerians developed a system of writing called **cuneiform**, originally used to record commercial transactions. The uses of writing eventually expanded to include business contracts, legal decrees, religious rites and beliefs, and the stories and myths of the people. The most famous of these stories, the *Epic of Gilgamesh*, is considered the world's first epic poem. Later Mesopotamian civilizations, including the Babylonian and Assyrians, adopted the use of cuneiform, which served as the region's principal writing system for nearly 2,000 years.

INVASION, RECOVERY, AND DECLINE

Although the Sumerian city-states belonged to a single civilization, there was little permanent cooperation among them. Control of scarce resources, territorial expansion, and control over trade routes were sources of frequent disputes and conflicts. This constant fighting, and the inability of the city-states to share resources or unite for common defense, made Sumer vulnerable to attack from its

TURNING POINT

Cuneiform

The world's first written script, called **cuneiform**, was developed in Sumer around 3100 B.C.E. The word *cuneiform* means "wedge-shaped," referring to the series of marks that comprised each of the symbols in later versions of the system. The earliest version of cuneiform used **pictographs** that were drawn to resemble the words they represented. However, creating these elaborate symbols was difficult and time-consuming. To speed the task of writing, the symbols became simpler and more abstract, eventually appearing as groups of wedge-shaped marks arranged in various patterns.

Scribes wrote by pressing a stylus, a smooth stick with a slanted tip, into a wet clay tablet. The wedged shape of the tip created the characteristic cuneiform pattern. When finished, the scribe left the tablet in the sun to dry, thus making the record permanent. This method of recordkeeping prevented alterations from being made to the **inscription**. Any sign of tampering would leave scratch marks in the dried clay. The clay tablets were also relatively immune from fire or flood damage.

The Babylonians adopted and spread the use of Sumerian cuneiform, which remained the principal writing system in Southwest Asia until the Phoenicians introduced the first phonetic alphabet around 1200 B.C.E. This much simpler system used just 22 symbols instead of the 500 to 1,000 symbols in cuneiform. In addition, the letters of the alphabet could be combined to produce virtually any sound, making it much more flexible for communicating in foreign languages. The spread of the alphabet doomed cuneiform to obsolescence. The last recorded cuneiform document dates to C.E. 75.

neighbors. The Akkadians, who dominated the region northwest of Sumer under their king Sargon (r. ca. 2334–ca. 2279 B.C.E.) of Akkad, conquered Sumer around 2330 B.C.E. Sargon united the Sumerian city-states with his kingdom in northern Mesopotamia, forming an empire that extended from the Persian Gulf to parts of present-day Turkey.

Around 2150 B.C.E., the Akkadian Empire was invaded by the Gutians, a nomadic tribe from the Zagros Mountains in what is now Iran. This led to a period of instability in the region, as the Gutians were not equipped to rule over a complex society such as had developed in Sumer. A new Sumerian dynasty arose when Ur-Nammu (r. ca. 2065–ca. 2047 B.C.E.) restored Sumerian control over the region. Fragments of clay tablets dating to his reign contain remnants of the world's oldest known law code. Ur-Nammu was succeeded by his son, Shulgi (r. 2047–1999 B.C.E.), who greatly expanded the network of roads that facilitated trade throughout the empire.

The remaining Sumerian kings were unremarkable rulers, and in 1957 B.C.E., the Elamites, who lived east of Sumer, invaded and took temporary control of the region. By 1900 B.C.E., the Amorites, who lived west of the Euphrates, had moved into Mesopotamia and emerged as the region's dominant group. Because they established a capital in the city of Babylon, they are known as the Babylonians. Although the rise of the Babylonian Empire marked the end of Sumerian civilization, the Babylonians adopted key aspects of Sumerian culture. As a result, Sumerian religion and social customs remained powerful influences throughout Mesopotamia for many centuries.

See also: Language and Writing; Mesopotamia; Religion; Technology and Inventions; Tools and Weapons; Ur.

FURTHER READING

Crawford, Harriet. *Sumer and the Sumerians*. New York: Cambridge University Press, 2004.

Dalley, Stephanie, ed. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. New York: Oxford University Press, 1998.

Gambino, Elena. *Ancient Mesopotamians*. New York: Bedrick, 2000.

Kirkpatrick, Nadia. *The Sumerians*. Chicago: Heinemann Library, 2003.

T

Technology and Inventions

As the site of the world's earliest civilizations, Southwest Asia and the Near East naturally was also the birthplace of many of the most important early developments in technology. Not surprisingly, early Mesopotamian innovations, such as irrigation, metalworking, and the calendar, were tied closely to agricultural production. Many of these early technologies, however, found multiple applications. For example, metalworking techniques that produced tools to plant and harvest crops also made weapons of war. Many of the technologies pioneered in ancient Mesopotamia spread to Europe and significantly influenced later Western civilization.

IRRIGATION

Southwest Asia and the Near East, although home to several major rivers, suffer from an inconsistent and unreliable water supply. Devastating floods and years of drought were common occurrences that forced the early inhabitants of the region to develop ways to exploit the area's water resources efficiently in order to survive. Basic irrigation practices made extensive agriculture—and thus civilization—possible in Mesopotamia around 5400 B.C.E. Irrigation technology first appeared in the Indus River valley about 2600 B.C.E.

Early irrigation systems consisted of canals dug from the rivers and running into the fields. This basic setup was enhanced by the invention of the *shaduf*, a device that made it easier to divert the river's water to the canals. It consists of a frame formed by two upright posts on which a horizontal wooden pole is suspended. The long end of the pole holds a bucket that hangs over the river; the other end holds a counterweight. After the bucket is lowered into the river, the counterweight lifts the water-filled bucket. The pole is then swung around and the water from the bucket is emptied into a canal, from which it flows into the field. Building, repairing, and expanding these irrigation systems required coordination of labor, an important early step toward the evolution of government.

METALWORKING

The invention of metalworking in Anatolia (modern-day Turkey) was directly responsible for a significant improvement in the quality and efficiency of tools and weapons in the fourth millennium B.C.E. Copper, which is abundant in Anatolia's mountains, was the first metal used widely to fashion implements. Around 3500 B.C.E., metalsmiths in the nearby Caucasus region (in what is now Georgia and southern Russia) found that combining tin with copper produced a stronger metal **alloy**, bronze. This discovery rapidly spread into Mesopotamia, ushering in the so-called **Bronze Age**.

LINK TO PLACE

Development of Scientific Thinking

Although the ancient inhabitants of Southwest Asia and the Near East demonstrated impressive skills in the fields of mathematics and astronomy, most scholars do not consider these contributions to be "scientific" advances. The modern notion of science implies the existence of theories to explain one's observations. While the Babylonians were able to predict accurately the movement of stars and planets, they had no theory to explain the movements that they observed. Although their calendars indicated reliably when spring would return, the cause of the turning of seasons remained a mystery.

Many scholars trace the roots of scientific thinking in the West to ancient Greece in the seventh and sixth centuries B.C.E. Unlike the Babylonians, the Greeks strongly emphasized the importance of forming theories based on close observation. The fourth-century B.C.E. Greek philosopher Aristotle performed experiments in many natural sciences including astronomy, biology, botany, chemistry, geology, and meteorology, proposing and testing theories to explain his observations. Using this approach, Greek thinkers sought natural explanations for physical phenomena that Mesopotamian cultures attributed to supernatural forces. For example, the Babylonians interpreted disease as punishment inflicted by the gods, while the Greeks argued that disease has a physical basis.

Archeologists have found many copper axe heads in Mesopotamia dating to the fourth millennium B.C.E., indicating that metal rapidly replaced stone for toolmaking soon after humans learned metalworking.

By the third millennium B.C.E., metalsmiths in Southwest Asia and the Near East also had learned to work iron. However, most of the early objects fashioned from iron were ceremonial or decorative, rather than functional. The iron being worked at this time was not being mined as ore, but rather was created as a byproduct of bronze smelting. This made it a rare and therefore expensive commodity, which probably is why it was used so sparingly. The Hittites of northern Anatolia were the first people systematically to mine iron ore to produce functional iron objects such as plows, axes, and weapons, in the fourteenth century B.C.E.

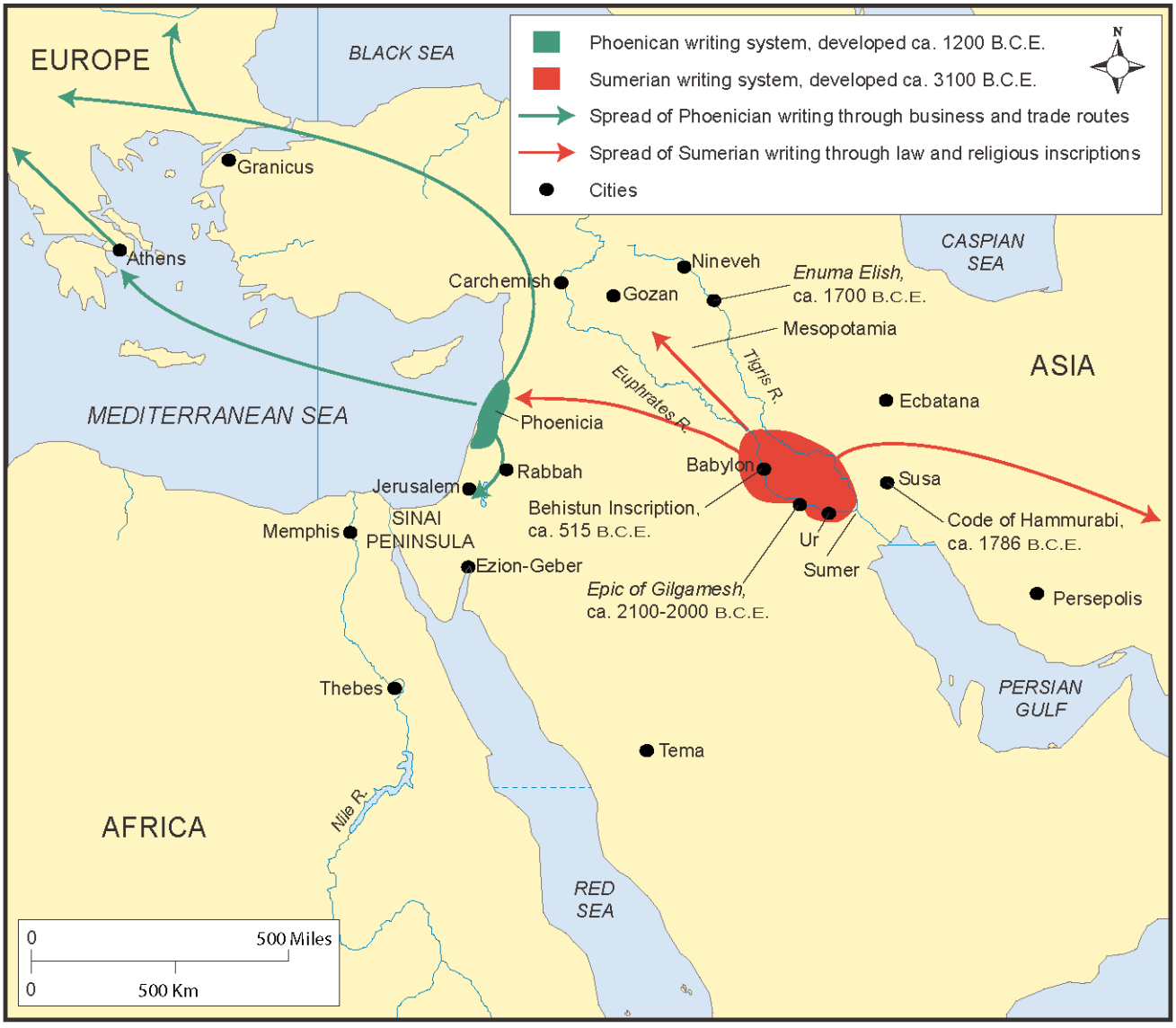
WRITING

The Sumerians invented the first writing system around 3100 B.C.E. The complexity of life in settled civilizations required a method to record business transactions, set down laws, keep tax records, and preserve important religious beliefs and rituals. The first writing system, known as **cuneiform**, consisted of wedge-shaped symbols that represented objects and ideas, not the sounds of speech as in a modern alphabet. The symbols were made by pressing a sharpened reed into a wet clay tablet. The tablet was then laid out in the sun to dry or baked in a kiln. This made the documents permanent, allowing them to survive floods and fires and preventing illegal alterations to the text.

All of the major civilizations of Mesopotamia adopted cuneiform but, with 500 to 1,000 symbols to master, it was cumbersome and difficult to learn. Around 1700 B.C.E., **Semitic**-speaking people in the Sinai Peninsula (an area in modern-day southern Israel) developed a simpler script that consisted of 22 symbols or letters representing speech sounds. The Phoenicians, a people based on the eastern shore of the Mediterranean Sea, adapted this script for their own use around 1200 B.C.E. The new alphabet greatly simplified recordkeeping, a significant consideration for a Phoenician society built on trade and commerce. The Phoenicians' alphabet accompanied them on their trading voyages, which helped to popularize and spread the script throughout Southwest Asia, the Near East, and the Mediterranean. Over time, other peoples adopted the Phoenician alphabet, which eventually

THE DEVELOPMENT OF WRITING, CA. 1500 B.C.E.

As ancient societies evolved and became more complex, the practice of writing allowed people to keep accurate records of finances and history, to record the stories and legends of their cultures, and to keep track of their possessions.



replaced cuneiform as the preferred means of written communication.

FERMENTATION

By the fifth millennium B.C.E., Mesopotamians and the residents of the city of Harappa in the Indus River valley independently discovered the ability to ferment grain to produce alcohol, in this case beer. A clay seal dating from about 4000 B.C.E. and used to ensure the privacy of documents, shows Ninkasi, who was apparently the patron goddess, brewing beer. There is also a reference to beer in the Sumerian literary work the *Epic of Gilgamesh*.

Fermentation was most likely discovered when someone noticed that the composition of grain (probably barley) changed when the grain got wet. Although beer is considered a leisure drink in modern society, its discovery was vitally important for people in ancient Mesopotamia, where the water generally was not safe to drink. Fermented drinks

TECHNOLOGY AND INVENTIONS

CA. 6000 B.C.E. Potter's wheel invented in Mesopotamia

CA. 5400 B.C.E. Irrigation introduced to Mesopotamia

CA. 5400–5000 B.C.E. Date of earliest evidence of winemaking, discovered in Zagros Mountains of modern-day Iran

CA. 3500 B.C.E. Wheel and axle first paired for use on carts

CA. 3100 B.C.E. Sumerians invent world's first writing system, cuneiform, consisting of symbols that represent objects and ideas

CA. 3000–2600 B.C.E. First evidence of mathematical knowledge in Indus River valley

CA. 2600 B.C.E. Irrigation introduced to Indus River valley

CA. 1800–1600 B.C.E. Earliest written evidence of Mesopotamian mathematical knowledge in Mesopotamia

CA. 1200 B.C.E. Phoenicians, a people inhabiting the eastern Mediterranean coast, develop the world's first alphabet

such as beer contained enough alcohol to kill waterborne contaminants and provided a more healthful drink than water.

Mesopotamians also learned how to use fermentation to make wine, first from wild grapes and later from grapes cultivated by farmers. Evidence for winemaking is found in residues at the bottom of ceramic jars excavated in archaeological digs in modern-day Iran's Zagros Mountains that date to 5400–5000 B.C.E. The earliest evidence of winemaking in Mesopotamia comes from the Sumerian city of Uruk and dates to 3500–3100 B.C.E.

PRACTICAL MATHEMATICS AND SCIENCE

The earliest evidence of mathematical knowledge appeared in the Indus River valley civilization between 3000 and 2600 B.C.E. These people developed fractions and appear to have understood the concept of pi, or the ratio between the diameter of a circle and its circumference. This knowledge proved invaluable for accurately surveying fields and building sites. In fact, the word *geometry* comes from a Greek term meaning "land measurement." Practical mathematics of this type made possible the construction of walled cities and monumental structures such as the Mesopotamian temple complexes called *ziggurats*.

Early Mesopotamian civilizations also applied mathematical principles to the study of the heavens for practical ends. By observing and recording the movements of the sun and moon, the Babylonians developed accurate calendars to mark the planting and harvesting seasons and to time the spring floods. They also developed a numerical system based on the number 60, which facilitated both the recording and analyzing of their observations. The modern division of circles into 360 degrees, and the use of 60-second minutes and 60-minute hours, derives from the Babylonian system.

Cultural contact spread many of the key technologies developed in Southwest Asia and the Near East to Europe. Bronzeworking, for example, which originated in Anatolia (modern-day Turkey) in the mid-fourth millennium B.C.E., spread to Crete and Greece during the third millennium. Trading powers such as the Minoan civilization of Crete (ca. 2600–1400 B.C.E.), and the Phoenicians in the first and second millennium B.C.E., brought Mesopotamian technology to the Mediterranean, where it helped form the foundations of the **classical** empires of Greece and Rome.

See also: Agriculture; Babylonia; Culture and Traditions; Harappa and Mohenjo-Daro; Indus

River; Language and Writing; Mesopotamia; Sumer; Tools and Weapons.

FURTHER READING

Evans, James. *The History and Practice of Ancient Astronomy*. New York: Oxford University Press, 1998.

Hodges, Henry. *Technology in the Ancient World*. New York: Barnes and Noble Books, 1992.

James, Peter, and Nick Thorpe. *Ancient Inventions*. New York: Ballantine Books, 1994.

Landels, John G. *Engineering in the Ancient World*. Berkeley: University of California Press, 2000.

Moss, Carol. *Science in Ancient Mesopotamia*. New York: Watts, 1999.

Tigris River

See Fertile Crescent; Mesopotamia.

Tools and Weapons

The rise of civilization in Southwest Asia and the Near East depended in large part on the development of implements that allowed the ancient inhabitants to exploit the region's natural resources. Tools such as the plow and wheel made possible the growth of the world's earliest urban cultures.

As these civilizations grew and prospered, they faced challenges from rivals who coveted the wealth generated by the early Mesopotamian **city-states**. The struggle for resources led to the creation of increasingly effective weapons to replace the stone-tipped spears and crude hand weapons of the **Neolithic era**.

THE WHEEL

The Sumerians are believed to have invented the wheel in the fifth millennium B.C.E. and used it both for transport and for making pottery. Potters used the wheel as a platform on which to form lumps of clay into various types of storage vessels. Prior to the invention of the wheel, pots were made by coiling strips of wet clay and placing them atop one another. This limited the size and shapes of pots that could be produced. The potter's wheel allowed **artisans** to work with larger lumps of clay, rotating them on the wheel and shaping them with both hands. As a result, potters were able to make larger pots in a variety of shapes and sizes.

As the usefulness of the wheel became apparent, the Sumerians found additional applications for it. By 3500 B.C.E., the wheel and axle combination, which led to the first wheeled vehicles, had been developed. The combination of wheel and axle significantly changed the nature of trade and warfare. Wheeled carts freed humans from the need to carry goods on their own backs and those of animals. This allowed the movement of more goods over greater distances in a shorter time, greatly enhancing trade in the region and with other areas. The wheel also made possible the invention of the chariot, used first to transport troops to war and later as a battlefield weapon in its own right.

THE PLOW

The development of tools in the region was driven initially by the need to produce more food. This led to the invention of increasingly better plows by Mesopotamian farmers.

The earliest farmers in the region probably used nothing more sophisticated than a stick to scratch rows in the thin soil, in which they then placed seeds. The need to improve on these crude methods led first to the invention of a simple hoe, with a single blade to create wider rows and to chop at the weeds that also grew in the fields. Neither of these

This stone model of an Amorite chariot was sculpted between 2000 and 1595 B.C.E. The first chariots were used to carry troops to battle and were not seen as fighting vehicles. By the seventeenth century B.C.E., the Hittites of Anatolia (modern-day Turkey) had developed lighter and faster chariots for use in battle. (Erich Lessing/Art Resource, NY)

methods was particularly effective in making the most of the area's agricultural potential.

Mesopotamian farmers invented the plow in the sixth millennium B.C.E., probably shortly after they first domesticated oxen. Oxen harnessed to the plow tilled the soil much more effectively than did individual farmers with hoes. The original plows were fairly simple, consisting of a frame with a downward pointed stick. These so-called scratch-plows broke the soil and moved it to both sides, but this action did not mix nutrients back into the soil. By 4000 B.C.E., farmers had invented a plow with a curved blade that turned the soil over, allowing them to mix the top layer of soil back into the earth. Overturning the soil mixed the nutrients it contained back into the fields, making them better able to support crops.

WAR AND WEAPONS

Most early warriors in ancient Southwest Asia and the Near East used the bow and spear, weapons that had been in existence for thousands of years. As city-states grew, they formed organized citizen armies, whose soldiers often used farm implements such as sickles, axes, and hoes as weapons. The spread of metalworking in the late fourth millennium B.C.E. led to the development of a new weapon—the sword. By the third millennium B.C.E., bronze swords and bronze-tipped spears were the typical weapons of Mesopotamian warriors.

The Royal Standard of Ur, dating to about 2750 B.C.E., is a mosaic depicting aspects of society in ancient Sumer. The standard, unearthed from royal graves in the southern Mesopotamian city of Ur, contains rows of figures on both sides. One side (shown here) contains images of war while the other (not pictured) features images of peacetime. (The Bridgeman Art Library/Getty Images)

An elaborate, carved box called the Standard of Ur, discovered during **excavation** of the Sumerian city of that name, depicts soldiers equipped with an impressive array of battle gear. Warriors wore copper helmets with a leather cap or lining underneath. The helmets, which fit close to the skull, were probably strong enough to resist a blow from a war mace, or heavy club. Soldiers also wore ankle-long

LINK TO PLACE

Standard of Ur

During a 1920s **excavation** at the ancient city of Ur, famed English **archeologist** Sir Leonard Woolley discovered a beautifully decorated box dated to 2600 B.C.E. This box has been named the Standard of Ur. It was part of the funereal goods found in a tomb located in the Royal Cemetery.

The box is called a standard because scholars believe it was carried on a pole accompanying the man with whom it was buried to show his office and importance. The standard is made of a variety of materials including white shells, red limestone, and lapis lazuli, which is a stone of a vibrant blue color.

One side of the Standard focuses on war and the other side on peace. The war panel shows the king of Ur, his nobles, priests, and soldiers preparing for war. The peace panel shows the same figures sitting at a banquet table, perhaps celebrating a victory in war. There are musicians playing lyres, small stringed instruments similar to harps, and servants bringing in a variety of animals. It is unclear if these animals are destined to be dinner or are part of the spoils won by the king in battle.

In addition to the intrinsic beauty and fine craftsmanship apparent in the piece, the Standard of Ur provides a glimpse of the appearance of the Sumerian people. The figures depict men with shaved heads and no facial hair. Civilians wore cloths wrapped around their waists, with warriors adding cloaks over their shoulders that were clasped together at the neck and fell to the ankles. The soldiers wear tight-fitting caps to protect their heads and carried short swords, spears, and shields.

ANCIENT WEAPONS

The Scythed Chariot

The chariot, although used widely in ancient Southwest Asia, had several limitations as a weapon of war. It was difficult to get horses to charge into tight infantry formations such as the phalanx employed by the Greeks and Macedonians. Chariots were offensive weapons best suited for combat in flat, open terrain that offered room to maneuver. The goal of a chariot attack was to smash into the enemy formation, inflicting casualties and sowing panic and disorder in the defender's ranks. However, a disciplined army could open gaps in its formation and allow chariots to pass through without causing a great deal of harm.

The scythed chariot was designed to offset several of these drawbacks. It consisted of a chariot with one or more blades mounted on each end of its axle. The blades extended about three feet (1 m) on each side of the chariot and were fixed pointing forward. This made it extremely difficult for troops to move quickly out of the chariot's path, for the blades allowed it to cut a much wider path of destruction. The Persians employed scythed chariots with some success, as did many of the warriors of the **Hellenistic** kingdoms ruled by the successors of Alexander III, the Great (r. 336–323 B.C.E). The last recorded use of scythed chariots was by troops under King Mithridates VI of Pontus (a kingdom in what is now Turkey) against Roman forces at the battle of Zela in 47 B.C.E.

leather cloaks with circles of metal sewn onto the outside. These metal plates were meant to deflect sword blows and spears. Other weapons depicted include short swords and javelins.

The invention of the wheel also transformed the way war was fought in ancient Southwest Asia and the Near East. The Sumerians used the wheel to create the first chariots, one of which is depicted in the Standard of Ur. Mesopotamian chariots had four wheels and were pulled by mules. These chariots were not used in battle, but rather to transport troops. The Hittites improved on the Mesopotamian design around 1800 B.C.E., creating a vehicle with lighter wheels that carried a driver and two soldiers.

Survival in ancient Southwest Asia and the Near East depended on growing enough food for the population and protecting the possessions and wealth that the king and his subjects amassed. The development of improved agricultural tools and weapons of war served these ends and advanced humankind's store of general knowledge.

See also: Anatolia; Archeological Discoveries; Harappa and Mohenjo-Daro; Hittites; Mesopotamia; Scythians; Sumer; Technology and Inventions.

FURTHER READING

Cernenko, E.V. Scythians, 700–300 B.C. London: Osprey, 1983.

Reeder, Ellen, and Michael Treister. *Scythian Gold*. New York: Harry N. Abrams, 1989.

Sekunda, Nicholas. *The Persian Army, 560–330 B.C.* Oxford: Osprey, 1992.

Zettler, Richard L., and Lee Horne, eds. *Treasures from the Royal Tombs of Ur*. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology, 1998.

Ur

Ancient Sumerian capital and earliest of the major Sumerian **city-states**. Also the biblical home of Abraham, Ur was founded on the lower Euphrates River around 3000 B.C.E. in what is now southern Iraq. Archeological **excavations** at Ur have unearthed monumental buildings, royal tombs, tablets containing **cuneiform inscriptions**, and outstanding examples of Sumerian craftsmanship and decoration.

Early irrigation systems in lower Mesopotamia supported widespread agricultural production and led to a significant increase in population by the fourth millennium B.C.E. This in turn facilitated the rise of large urban settlements such as Ur. **Archeologists** estimate that, by about 2030 B.C.E., Ur had a population of 65,000 and may well have been the largest city of its day. Its warrior-king was the leader of a centralized government that ruled over a **hierarchical** society.

The power and organizational abilities of the government were exemplified by the Great Ziggurat built in the city by King Shulgi (r. 2047–1999 B.C.E.) and which is still standing. At the top of the *ziggurat*, a massive building consisting of a series of levels, stood a temple dedicated to Nanna, the moon god and patron deity of Ur. The ziggurat measured approximately 210 feet (64 m) by 150 feet (46 m) and stood 65 feet (20 m) high.

This and similar building projects were paid for in part by the proceeds from Ur's extensive trade in the Persian Gulf and other Sumerian city-states. Using the harbor at Dilmun, in modern-day Bahrain, the merchants of Ur carried on extensive trade as far away as the Indus River valley cities in what are now India and Pakistan.

Around 2330 B.C.E., Sumer was invaded by the Akkadians of northern Mesopotamia, who captured Ur and incorporated it into their empire. Over the next 1800 years, the city was conquered and reconquered by a number of civilizations, including those of the Elamites and Babylonians. However, the city continued to prosper, because of its strategic location on the trans-Mesopotamian trade routes. By the sixth century B.C.E., the waters of the Persian Gulf retreated, silting up the harbor and leaving Ur landlocked. Without immediate access to the Gulf, Ur's merchants were no longer able to participate in the sea trade with the Indus River valley population. A severe drought that hit the area at around the same time led to large-scale exodus from Ur. By 500 B.C.E., the city was abandoned.

See also: Archeological Discoveries; Babylonia; Sumer.

FURTHER READING

Aruz, Joan, ed. *Art of the First Cities: The Third Millennium B.C. from the Mediterranean to the Indus*. New York: Metropolitan Museum of Art, 2003.

Charvát, Petr. *Mesopotamia Before History*. New York: Routledge, 2002.

Kirkpatrick, Naida. *The Sumerians*. Chicago: Heinemann Library, 2003.

Zettler, Richard L., and Lee Horne, eds. *Treasures from the Royal Tombs of Ur*. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology, 1998.

Ziggurat

See Art and Architecture; Religion.

Zoroastrianism

Monotheistic religion of ancient Persia, whose teachings are summed up in the phrase "good thoughts, good words, good deeds." During the Persian Empire (648–330 B.C.E.), Zoroastrianism was the dominant religion in ancient Southwest Asia, and its ideas may have influenced Judaism, Christianity, and Islam. Zoroastrianism continues to be practiced today, although with fewer adherents than in **antiquity**.

Scholars have long debated whether Zoroastrianism is truly monotheistic, since its god has two equally powerful aspects and is supported by a secondary group of divine powers. The single god of Zoroastrianism is called Ahura Mazda, creator of the world and all good things. Ahura Mazda is divided into twin spirits: Spenta Mainyu, the good and life-giving spirit, and Angra Mainyu or Ahriman, the evil spirit. There are also six spirits who assist Spenta Mainyu. Each of these so-called Amesha Spentas represents an aspect of goodness and virtue, including desirable power, wholeness, piety, morality, good thought, and justice. Spenta Mainyu and the six spirits are in a permanent battle with six evil spirits and Angra Mainyu. This eternal battle between good and evil is at the heart of Zoroastrianism.

Zoroastrianism rejects the concept of predestination, the idea that one's fate is determined by a divine power. Instead, it teaches that people are born with free will, and that each person is responsible for his or her own actions, and for choosing to reject evil and to act for the good. After death, individuals are judged on the merit of their thoughts, words, and deeds. Those who have lived good lives join Ahura Mazda in heaven; those who have not spend time in hell.

The religion was first taught by a prophet named Zarathustra (or Zoroaster), a mysterious figure said to have lived some time between the eighteenth and sixth centuries B.C.E., possibly somewhere in the northeastern area of ancient Persia. Zarathustra claimed that the revelations for the faith came from Ahura Mazda. They were recorded as poems called *Gathas* in an ancient Persian dialect. Worship focuses on prayers usually chanted before an altar with a sacred fire burning. This represents the positive force of Ahura Mazda.

Zoroastrianism includes ideas present in the later faiths of Judaism, Christianity, and Islam, which are known as Abrahamic faiths, tracing their origins back to the biblical figure Abraham. Chief among the concepts found in Zoroastrianism and later in the other religions are heaven, hell, last judgment, purgatory, angels, evil spirits, and the coming of a messiah, or messenger. The meaning of each of these concepts is similar in all four faiths, with the exception of hell. Rather than a place where the damned are sent for eternity as believed in Christianity, hell in Zoroastrianism is a temporary place where evildoers are held after death until good triumphs in the world. At that point, they undergo a purification process, after which they join Ahura Mazda.

See also: Christianity; Islam; Jews and Judaism; Persia; Religion.

FURTHER READING

Abisaab, Rula Jurdi. *Converting Persia: Religion and Power in the Safavid Empire*. New York: Tauris, 2004.

Kriwaczek, Paul. *In Search of Zarathustra: The First Prophet and the Ideas that Changed the World*. New York: Knopf, 2003.

Smith, Huston. *The World's Religions: Our Great Wisdom Traditions*. San Francisco: HarperSanFrancisco, 1991.

Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationship A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretation and analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history, cultural An analysis of history in terms of a people's culture, or way of life, including investigating patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political An analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

history of science and technology Study of the evolution of scientific discoveries and technological advancements

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remain constant or show marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radiocarbon dating A test for determining the approximate age of an object or artifact by measuring the number of carbon-14 atoms in that object

social history See history, social

Key Terms Found in A to Z Entries

alloy Substance that is a mixture of two or more metals

animism General belief that everything possesses a soul or a spirit

antiquity The ancient past, particularly referring to the history of the Western world before the fall of the Roman Empire in C.E. 476

archeologist A scientist who studies prehistoric people and their culture

aristocratic In a society, belonging to the nobility or the ruling class, whose wealth is generally based on land and whose power is passed on from one generation to another

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament; archeologists study artifacts of ancient cultures to try to learn more about them

artisan A skilled craftsperson or worker who practices a trade or handicraft

barter To trade one item for another of equal value

Bronze Age Historical period marked by introduction of bronze for tools and weapons

city-state A city and the area immediately around it

classical Term applied to the culture that flourished between 480 and 323 B.C.E. in Greece

cuneiform Earliest writing system of ancient Mesopotamia consisting of symbols representing objects and ideas

diaspora Forced dispersal of a group of people from their homeland to other places generally as a form of punishment meant to destroy that people's unique culture, religion, or political beliefs

doctrine A set of principles presented for acceptance or belief, such as by a religious, political, or philosophical group

egalitarian Characterized by social equality

equinox Literally "equal night"; an astronomical term referring to the two days each year in which daylight and darkness are approximately equal; usually March 21 (spring equinox) and September 21 (autumnal equinox)

excavation Literally "digging"; the primary technique used by archeologists to uncover evidence of prehistoric life

Hellenistic Describing Greek culture from the time of Alexander III, the Great (r. 336–323 B.C.E.), to approximately the first century B.C.E., when the Greek language and ideas were carried to the non-Greek world

hierarchical Describing an organization, especially of persons, that ranks people by authority or importance; societies that are hierarchical have distinct social classes, some of which are considered superior to others

hieroglyph A pictorial symbol used to express a word, syllable, or sound

Ice Age An extended period of extremely low temperatures; there have been many ice ages in the history of the earth

inscription Writing carved or engraved on a surface such as a coin, tablet, or stone monument

Iron Age Historical period, following the Bronze Age, and marked by introduction of ironworking technology

linguist A person who studies human speech, especially languages and the means of communication

Mesolithic Period Era also known as the Middle Stone Age, characterized by the adoption of the bow and flint tools and ending with the introduction of agriculture

monotheism Belief in a single deity

Neolithic Period Also known as the New Stone Age, an interval in human culture from about 10,000 to 3000 B.C.E., starting with the introduction of agriculture and ending with the introduction of the first metal implements and weapons

Neolithic Revolution Period in the Near East and Southwest Asia from about 8000 to 6000 B.C.E. during which the transition from hunting and gathering to agriculture occurred

Paleolithic Period Also called the "Old Stone" Age, from the Greek; the period in human development from about 450,000 to 10,000 B.C.E., beginning with the use of the earliest stone tools and ending with the adoption of the bow and flint tools; historians further classify the era as the Lower Paleolithic Period (about 450,000 to 100,000 B.C.E.), Middle Paleolithic Period (100,000 to 40,000 B.C.E.), and Upper Paleolithic Period (40,000 to 10,000 B.C.E.)

pantheon All the gods of a particular people, or, a temple dedicated to all the gods of a particular people

pastoral Characterized by a rural life, peaceful, simply, and natural

patriarchal A type of society ruled by male leaders, where men typically possess sole religious, political, and domestic authority

pictograph A pictorial representation of a word or idea

polytheism Worship of a number of deities, often representations of natural forces, such as the rain or the wind

relief A type of sculpture in which partially raised figures project from a flat background, giving the appearance of dimension

secular Related to worldly things, as opposed to religion and church

Semitic Person of Hebrew, Arabic, Assyrian or Phoenician decent

stratification Division into different levels or orders based on rank

textiles Items made of cloth or fabric, or the fibers used to weave a fabric

tribute Payment from one nation or group to another as a sign of respect or to acknowledge submission

vassal A person who owes loyalty or service to a more powerful individual in a social system or context

Selected Bibliography

Abbott, Jacob. *Darius the Great: Ancient Ruler of the Persian Empire*. Long Beach, CA: Lost Arts Media, 2003.

"Achaemenians." Accessed 9 Jan 2007. http://www.livius.org/aa-ac/achaemenians/achaemenians.html.

Albenda, Pauline. *Ornamental Wall Painting in the Art of the Assyrian Empire*. Boston: Brill Academic Publishers, 2005.

Albertz, Rainer. *Israel in Exile: The History and Literature of the Sixth Century* B.C.E. Translated by David Green. Atlanta, GA: Society of Biblical Literature, 2003.

Allchin, Bridget, and Raymond Allchin. *The Rise of Civilization in India And Pakistan*. New Delhi, India: Cambridge University Press, 1996.

Amiet, Pierre. *Art of the Ancient Near East*. Translated by John Shepley and Claude Choquet. New York: H.N. Adams, 1980.

Armstrong, Karen. *Islam: A Short History*. New York: Random House, 2002.

———. *Muhammad: A Biography of the Prophet*. New York: HarperCollins, 1993.

Artamonov, Mikhail Ilarionovich. *The Splendor of Scythian Art: Treasures from Scythian Tombs*. New York: Praeger, 1969.

Aruz, Joan, ed. *Art of the First Cities: The Third Millennium B.C. from the Mediterranean to the Indus*. New York: Metropolitan Museum of Art, 2003.

"The Assyrians." *World Cultures*, Accessed 9 Jan 2007. http://wsu.edu/_dee/MESO/ASSYRIA.HTM.

Aubet, Maria Eugenia. *The Phoenicians and the West: Politics, Colonies, and Trade*. Translated by Mary Turton. 2nd ed. New York: Cambridge University Press, 2001.

"Babylonia." *International World History Project*, Accessed 9 Jan 2007. http://history-world.org/babylonia.htm.

"Babylonians." *Civilizations of the Middle East*, Accessed 9 Jan 2007. http://home.cfl.rr.com/crossland/AncientCivilizations/Middle_East_Civilizations/Babylonians/babylonians.html.

Balcer, Jack Martin. *Sparda by the Bitter Sea: Imperial Interaction in Western Anatolia*. Chico, CA: Scholars Press, 1984.

Balter, Michael. *Goddess and the Bull: Catalhoyuk: An Archaeological Journey to the Dawn of Civilization*. New York: Free Press, 2005.

Barnes, Trevor. *Judaism: Worship, Festivals and Ceremonies from Around the World*. Boston: Kingfisher, 2005.

Bellwood, Peter. *First Farmers: The Origins of Agricultural Societies*. Malden, MA: Blackwell, 2004.

Bermant, Chaim. *Ebla: A Revelation in Archaeology*. New York: Time Books, 1979.

Bertman, Stephen. *Handbook to Life in Ancient Mesopotamia*. Oxford: Oxford University Press, 2003.

BetBassoo, Peter. "Brief History of Assyrians." Accessed 9 Jan 2007. http://www.aina.org/aol/peter/brief.htm.

Bowden, Rob. *Settlements of the Indus River*. Portsmouth, NH: Heinemann Educational Books, 2004.

Boyce, Mary. *A Persian Stronghold of Zoroastrianism*. Oxford: Clarendon Press, 1977.

Bramwell, Neil. *Civilizations of the Ancient World: Ancient Persia*. Berkeley Heights, NJ: Enslow, 2004.

Brown, Schuyler. *The Origins of Christianity: A Historical Introduction to the New Testament*. New York: Oxford University Press, 1993.

Bryant, Tamera. *The Life and Times of Hammurabi*. Hockessin, DE: Mitchell Lane, 2005.

Bryce, Trevor. *The Kingdom of the Hittites*. Oxford: Oxford University Press, 2006.

———. *Life and Society in the Hittite World*. Oxford: Oxford University Press, 2004.

Ceram, C.W. *The Secret of the Hittites: The Discovery of an Ancient Empire*. New York: Schocken Books, 1973.

Chadwick, Robert. *First Civilizations: Ancient Mesopotamia and Ancient Egypt*. 2nd ed. London: Equinox, 2005.

Charvát, Petr. *Mesopotamia Before History*. New York: Routledge, 2002.

Chirichigno, Gregory C. *Debt-Slavery in Israel and the Ancient Near East*. Sheffield, UK: JSOT Press, 1993.

Chrisp, Peter. *Mesopotamia: Iraq in Ancient Times*. New York: Enchanted Lion Books, 2004.

Clark, Peter. *Zoroastrianism: An Introduction to Ancient Faith*. Brighton, UK: Sussex Academic Press, 1998.

Cline, Eric H. *Jerusalem Besieged: From Ancient Canaan to Modern Israel*. Ann Arbor: University of Michigan Press, 2004.

Collon, Dominique. *Ancient Near Eastern Art*. Berkeley: University of California Press, 1995.

Corrick, James A. *Byzantine Empire*. San Diego, CA: Lucent, 2006.

Crawford, Harriet. *Sumer and the Sumerians*. New York: Cambridge University Press, 2004.

Cunningham, Alexander. *The Ancient Geography of India*. Varanasi, India: Indological Book House, 1979.

Curtis, John, and Nigel Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. Berkeley: University of California Press, 2005.

Dalley, Stephanie, ed. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. New York: Oxford University Press, 1998.

De Hamel, Christopher. *The Book: A History of the Bible*. New York: Phaidon, 2001.

Fein, J.S., and P.L. Stephens. *Monsoon*. New York: Wiley, 1987.

Frater, Alexander. *Chasing The Monsoon: A Modern Pilgrimage Through India*. New York: Holt, 1992.

Fredriksen, Paula. *From Jesus to Christ: The Origins of the New Testament Images of Christ*. 2nd ed. New Haven, CT: Yale University Press, 2000.

Friedman, Richard E. *Who Wrote the Bible?* New York: HarperCollins, 1997.

Garthwaite, Gene R. *The Persians*. Malden, MA: Blackwell, 2005.

Goldhill, Simon. *The Temple of Jerusalem*. Cambridge, MA: Harvard University Press, 2005.

Goodspeed, George. *A History of the Babylonians and Assyrians*. New York: Scribner, 1902.

Grant, Michael. *Constantine the Great: The Man and His Times*. New York: Scribner, 1994.

Green, Peter, ed. *Hellenistic History and Culture*. Berkeley: University of California Press, 1996.

Guisepi, Robert. "The Hittites." *International World History Project*, Accessed 9 Jan 2007. http://history-world.org/hittites.htm.

Hanfmann, George M.A. *From Croesus to Constantine: The Cities of Western Asia Minor and Their Arts in Greek and Roman Times*. Ann Arbor: University of Michigan Press, 1975.

Healy, Mark. *The Ancient Assyrians*. London: Osprey, 1991.

Hodder, Ian. "Women and Men at Çatalhöyük." *Scientific American Magazine*, January 2004.

Hoffner, Harry A., Jr. *Hittite Myths*. Atlanta: Scholars Press, 1998.

———. *The Laws of the Hittites*. New York: Brill, 1997.

Howard, Douglas. *The History of Turkey*. Westport, CT: Greenwood Press, 2001.

Kenoyer, Jonathan M. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.

Keshavamurty, R.N., and M. Shankar Rao. *The Physics of Monsoons*. Bombay, India: Allied, 1992.

King, L.W. *The Code of Hammurabi*. New York: Kessinger, 2004.

Kingfisher, Dorothy. *Islam, Christianity and Judaism*. Broomall, PA: Mason Crest, 2004.

Kirkpatrick, Nadia. *The Sumerians*. Chicago: Heinemann Library, 2003.

Kraeling, Emil. *Aram and Israel; or, The Aramaeans in Syria and Mesopotamia*. New York: Columbia University Press, 1918.

Kramer, Samuel Noah. *Cradle of Civilization*. Alexandria, VA: Time-Life Books, 1978.

———. *History Begins at Sumer: Thirty-nine Firsts in Man's Recorded History*. 3rd ed. Philadelphia: University of Pennsylvania Press, 1981.

———. *The Sumerians: Their History, Culture, and Character*. Chicago: University of Chicago Press, 1971.

Kumud. *Handicrafts in the Indus Valley Civilization*. Patna, India: Janaki Prakashan, 1995.

Landau, Elaine. *The Babylonians*. Brookfield, CT: Millbrook Press, 1997.

Larsen, Mogens Trolle. *The Conquest of Assyria: Excavation in an Antique Land*. New York: Taylor and Francis, 1996.

Laurie, Guy. *Introducing Early Christianity: A Topical Survey of Its Life, Beliefs, and Practices*. Downers Grove, IL: Intervarsity Press, 2004.

Leick, Gwendolyn. *The Babylonians: An Introduction*. New York: Routledge, 2003.

Lendering, Jona, "Achaemenids." *Livius: Articles on Ancient History*. Accessed 9 Jan 2007. http://www.livius.org/aa-ac/achaemenians/achaemenians.html.

Lipinski, Edward. *The Arameans: Their Ancient History, Culture and Religion*. Leuven, Belgium: Peeters, 2000.

Lloyd, Seton. *Ancient Architecture*. Milan, Italy: Electa Architecture, 2004.

———. *Ancient Turkey: A Traveller's History of Anatolia*. Berkeley: University of California Press, 1989.

———. *The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest*. New York: Thames and Hudson, 1984.

MacQueen, J.H. *The Hittites and Their Contemporaries in Asia Minor*. London: Thames and Hudson, 1986.

Malam, John. *Mesopotamia and the Fertile Crescent: 10,000–539 B.C.* Austin, TX: Raintree Steck-Vaughn, 1999.

Markoe, Glenn E. *Phoenicians*. Berkeley: University of California Press, 2000.

Marston, Elsa. *The Byzantine Empire*. Tarrytown, NY: Benchmark Books, 2002.

Matthews, Roger. *The Archaeology of Ancient Mesopotamia: Theories and Approaches*. New York: Routledge, 2003.

Matthews, Victor H., and Don C. Benjamin. *The Social World of Ancient Israel*. Peabody, MA: Hendrickson, 1993.

McClymond, Michael James. *Familiar Stranger: An Introduction to Jesus of Nazareth*. Grand Rapids, MI: W.B. Eerdmans, 2004.

McKeon, John F.X., ed. *The Art of Sumer and Akkad*. Boston: Museum of Fine Arts, 1973.

Mellaart, James. *Catal Huyuk: A Neolithic Town in Anatolia*. New York: McGraw-Hill, 1967.

Mendelsohn, Isaac. *Slavery in the Ancient Near East: A Comparative Study of Slavery in Babylonia, Assyria, Syria, and Palestine from the Middle of the Third Millennium to the End of the First Millennium*. Westport, CT: Greenwood Press, 1949, reprint 1978.

Michel, Aloys A. *The Indus Rivers*. New Haven, CT: Yale University Press, 1987.

Millard, Anne. *The First Civilisations: From 10,000 B. C. to 1500*. London: Usborne, 1990.

Miller, J. Maxwell, and John Haralson Hayes. *A History of Ancient Israel and Judah*. Philadelphia: Westminster Press, 1986.

Mitchell, Steven. *Anatolia: Land, Men and Gods in Asia Minor*. New York: Oxford University Press, 1993.

Moscati, Sabatino. *The World of the Phoenicians*. New York: Praeger, 1968.

Müller, Carl Otfried. *Ancient Art and Its Remains*. London: Adamant Media, 2005.

Nardo, Don. *Ancient Mesopotamia*. New York: Lucent Books, 2004.

Nemet-Nejat, Karen R. *Daily Life in Ancient Mesopotamia*. Peabody, MA: Hendrickson, 1998.

Nickelsburg, George W.E. *Ancient Judaism and Christian Origins: Diversity, Continuity, and Transformation*. Minneapolis: Fortress Press, 2003.

Pedley, John Griffiths. *Sardis in the Age of Croesus*. Norman: University of Oklahoma Press, 1968.

Pelikán, Jaroslav. *Whose Bible Is It? A History of the Scriptures Through the Ages*. New York, Viking, 2005.

Pettinato, Giovanni. *The Archives of Ebla: An Empire Inscribed in Clay*. Garden City, NY: Doubleday, 1981.

———. *Ebla: A New Look at History*. Baltimore: Johns Hopkins University Press, 1991.

Pohlsander, Hans A. *The Emperor Constantine*. New York: Routledge, 2004.

Psellus, Michael. *Fourteen Byzantine Rulers: Chronographia of Michael Psellus*. Translated by E.R. Sewter. New York: Penguin, 1979.

Ratnagar, Shereen. *Encounters: The Westerly Trade of the Harappa Civilization*. Oxford: Oxford University Press, 1981.

———. *Understanding Harappa: Civilization in the Greater Indus Valley*. New Delhi, India: Tulika Press, 2001.

Reade, Julian. *Assyrian Sculpture*. Cambridge, MA: Harvard University Press, 1999.

Reeder, Ellen, and Michael Treister. *Scythian Gold*. New York: Abrams, 1989.

Rice, Tamara Talbot. *The Scythians*. New York: Praeger, 1957.

Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts On File, 1990.

Rochberg, Francesca. *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge, MA: Cambridge University Press, 2004.

Rodriguez, Junius P. *Chronology of World Slavery*. Santa Barbara, CA: ABC-CLIO, 1999.

Rolle, Renate. *The World of the Scythians*. Berkeley: University of California Press, 1989.

Roux, Georges. *Ancient Iraq*. New York: Penguin, 1992.

Russell, John Malcolm. *The Final Sack of Nineveh: The Discovery, Documentation and Destruction of Sennacherib's Palace at Nineveh, Iraq*. New Haven, CT: Yale University Press, 1998.

Sack, Ronald Herbert. *Cuneiform Documents from the Chaldean and Persian Periods*. Selinsgrove, PA: Susquehanna University Press, 1995.

Saggs, H.W.F. *The Babylonians*. Norman: University of Oklahoma Press, 1995.

———. *The Greatness That Was Babylon: A Survey of the Ancient Civilization of the Tigris-Euphrates Valley*. London: Sidgwick and Jackson, 1988.

———. *The Might That Was Assyria*. New York: St. Martin's Press, 1990.

Schomp, Virginia. *Ancient Mesopotamia: The Sumerians, Babylonians, and Assyrians*. New York: Franklin Watts, 2004.

Shanks, Hershel. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. 2nd ed. New York: Prentice Hall, 1999.

Shuter, Jane. *Mesopotamia*. Chicago: Heinemann Library, 2006.

Silberman, Neil Asher, and Israel Finkelstein. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Touchstone, 2002.

Smith, Bruce D. *The Emergence of Agriculture*. New York: Scientific American Library, 1995.

Snell, Daniel C. *Life in the Ancient Near East: 3100–332 B.C.* New Haven, CT: Yale University Press, 1997.

Sokoloff, Michael, ed. *Arameans, Aramaic, and The Aramaic Literary Tradition*. Ramat-Gan, Israel: Bar-Ilan University Press, 1983.

Sonn, Tamara. *A Brief History of Islam*. Malden, MA: Blackwell, 2004.

Stefoff, Rebecca. *The Ancient Near East*. Tarrytown, NY: Benchmark Books, 2005.

"Sumerians." *Civilizations of the Middle East*, Accessed 9 Jan 2007. http://home.cfl.rr.com/crossland/AncientCivilizations/Middle_East_Civilizations/Sumerians/sumerians.html.

Swisher, Clarice. *The Ancient Near East*. San Diego, CA: Lucent Books, 1995.

Van de Mieroop, Marc. *The Ancient Mesopotamian City*. Oxford: Clarendon Press, 1997.

———. *A History of the Ancient Near East, ca. 3000–323 BC*. Malden, MA: Blackwell, 2004.

———. *King Hammurabi of Babylon: A Biography*. Malden, MA: Blackwell, 2005.

Vanderkam, James C. *An Introduction to Early Judaism*. Grand Rapids, MI: Eerdmans, 2000.

Wallenfells, Ronald. *Ancient Mesopotamia: 3300–331* B.C.E. Detroit, MI: Thomson-Gale, 2005.

Watt, William Montgomery. *Muhammad: Prophet and Statesman*. Oxford: Oxford University Press, 1961.

White, L. Michael. *From Jesus to Christianity: How Four Generations of Visionaries and Storytellers Created the New Testament and Christian Faith*. San Francisco: HarperCollins, 2004.

Wiesehöfer, Josef. *Ancient Persia: From 550 B.C. to 650 A.D.* Translated by Azizeh Azodi. London: Tauris, 1996.

Wilber, Donald Newton. *Persepolis: The Archaeology of Parsa, Seat of the Persian Kings*. Princeton, NJ: Darwin Press, 1989.

Wilkinson, Philip. *Islam*. New York: Dorling Kindersley, 2005.

Wilkinson, T.J. *Archaeological Landscapes of the Near East*. Tucson: University of Arizona Press, 2003.

Woods, Michael, and Mary B. Woods. *Ancient Agriculture: From Foraging to Farming*. Minneapolis: Runestone Press, 2000.

Zaehner, R.C. *The Dawn and Twilight of Zoroastrianism*. New York: Putnam, 1961.

Zettler, Richard L., and Lee Horne, eds. *Treasures From the Royal Tombs of Ur*. Philadelphia: University of Pennsylvania, Museum of Archaeology and Anthropology, 1998.

Zeinert, Karen. *The Persian Empire*. Tarrytown, NY: Benchmark Books, 1996.

Zeigler, David. *Israel*. Philadelphia: Chelsea House, 2002.

Zohary, Daniel, and Maria Hopf. *Domestication of Plants in the Old World*. Oxford: Oxford University Press, 2001.

Index

Note: bold entries indicate glossary term; *t* indicates timeline; *m* indicates map; *p* indicates photo.

A
Abbasids, 49, 50*t*, 62, 88
Abraham, 52–53, 84
Achaemenes, 75
Acinaces, 76
Agriculture, 1–4
  art and, 3*p*, 26
  Çatal Huyuk, 26–27
  domestication, xiii, 1
  early, 39–40
  environmental issues, 1–2
  founder crops, 2, 39
  gender roles, 3
  irrigation, 2, 47, 65, 99, 102*t*
  Mesopotamia, 1–4, 65
  monsoons and, 68
  plows, 103–104
  religion and, 4
  rituals and festivals, 32
  society and, 2–3, 40, 92
  Sumer, 96
  urbanization and, 31
Ahura Mazda, 108
Akitu, 32
Akkadian language, 34
Akkadians, 19–20, 19*t*, 66, 98
Al-Aqsa Mosque, 51
Alexander the Great, 5, 34, 61, 78, 78*t*
Alexandria library, 61*t*
Allah, 48
Alloys. *See* Metal **alloys**
Alphabet. *See* Writing
Alyattes, 63
Amorites, 21, 39, 98
  Humbaba demon, 70*p*
Anatolia, 5, 8, 99
Animals, domestication, 1
Animistic religion. *See* Religion
Antiquity, 112
Aqaba, 10–11, 11*t*
Aramaic language, 6, 34
Arameans, 6
Arch, 24
Archeological discoveries, 6–12
Archeologists, 7, 112
Archeology, beginnings of scientific, 7
Architecture, 14–16
  Byzantine Empire, 24
  Çatal Huyuk, 26
  Harappa and Mohenjo-Daro, 42–43
  Sumerian, 66, 107
  See also Art; Housing; Ziggurats
Ardys II, 62
Aristocratic, 112
Arsacids, 74
Art, 12–14
  agriculture and, 3*p*, 26
  banned images, 14
  Byzantine Empire, 24
  Çatal Huyuk, 26
  depicting war, 105*p*
  Scythian, 12, 14, 31
  woven carpets, 95
  See also Architecture; Figurines; Metalwork; Mosaics
Artifacts, 112
Artisans, 3, 12, 112
Asha, 84
Ashipu, 66
Ashur-uballit I, 16, 17*t*
Ashurbanipal, 61
Ashurnasirpal II, 16–17, 17*t*
Assyria, 6, 16–17
  art and architecture, 17
  culture, 34
  fall of, 27
  government, 67
  religion, 34
  timeline, 17*t*
  trade, xiv, 8
Astrology, 35
Astronomy, 40
Asu, 66
Atiku, 32
Axle, 102*t*, 103
Ayla, 10–11, 11*t*

B
Babylon, 18–21
  Assyrian conquest, 16
  culture, 34
  eras, 20–21
  excavations, 28*p*
  Hanging Gardens of, 18, 19*p*, 27
  Ishtar Gate, 15–16, 15*p*
  myths, 69–70
  religion, 21, 34, 69
  technology and inventions, 21, 67, 102
  timeline, 19*t*
  See also Hammurabi; Nebuchadrezzar II
Babylonia. *See* Babylon
Babylonian captivity. *See* Babylonian exile
Babylonian exile, 27, 34, 51, 75, 85, 86*t*
Barter, 63, 112
Basilica, 24
Beer, 101
Behistun **inscription**, xv, 7, 11*t*, 58, 61*t*
Bible, 21–22
  See also Old Testament; Scriptures
Bogazkoy tablets, 45
Book of Isaiah, 9*p*
Botta, Paul Emile, 11*t*
Bronze Age, 99, 112
Bronzeworking, 102
Brueghel the Elder, Pieter, 13*p*
Burial sites and practices
  Çatal Huyuk, 26
  Mesopotamian, 84
  Sumerian, 10
  See also Tombs
Byzantine Empire, 22–24

C
Cambyses III, 75, 78*t*
Cannan, 84
Cannibalism, 91
Carpets, woven, 95
Carthage, 79, 81
Carts, 102*t*, 103
Çatal Huyuk, 5, 14, 26–27
Cause-and-effect relationship, 2, 111
Cemeteries. *See* Burial sites and practices
Chaldeans, 27
Chariot battles, 45
Chariots, 103, 104*p*, 106
Cherokee, 71
Christian scriptures, 22
Christianity, 28–30
  Abraham, 52
  Constantine I and, 23, 24
  Great Schism, 30, 30*t*
  origins, 29–30, 56, 86–87
  prophets, 35
  timeline, 30*t*
  See also Jesus of Nazareth; Religion
Chronological thinking, 7, 111
Cimmerians, 62
City planning, 14–15, 42–43
City-states, 112
  Anatolia, 5
  Ebla, 38
  Mesopotamian, 4, 15
  Persian Wars, 78, 78*t*
  Phoenician, 80
  Sumerian, 65, 96, 98, 107
Classical, 112
Clay tablets. *See* Writing
Code of Hammurabi, 21, 41–42, 41*p*, 61*t*, 94
Coins. *See* Gold coins
Commerce. *See* Trade
Constantine I, 22–24, 30*t*, 87
Copper, 99–100
Cosmology
  Mesopotamian, 69–71
  Persian, 72
Creation stories. *See* Myths
Croesus, 63
Crops. *See* Agriculture
Cultural history, 3, 111
Culture
  of toleration, 34–35, 75
  tribal, 31
  urban, 31–34
Cuneiform, xiii, 7, 100, 112
  Bogazkoy tablets, 45
  clay tablets, 58*p*
  Code of Hammurabi, 41
  Cyrys Cylinder, 77
  Ebla tablets, 38
  origin of, 57, 61*t*, 97, 102*t*
  reasons for using, 65–66
  See also Writing
Cylinder seal, 94*p*
Cyrus II, 27, 51, 63, 75, 77
Cyrys Cylinder, 77

D
Daggers. *See* Weapons
Darius I, the Great, 37–38, 58–59, 75–77

Darius III, 78
David (King of Israel), 55
  Israel in the time of, 53*m*
Dead Sea Scrolls, 9*p*, 10
Defensive walls, 14, 15*p*
Deities
  agricultural, 4, 32
  Babylonian, 21, 34, 69–70
  Mesopotamian, 4, 35, 69, 83–84, 94*p*
  pantheon, 4, 69, 83, 113
  polytheistic, 55
  Roman, 35
  Scythian, 31
  Sumerian, 32, 69
  See also Religion
Delhi Sultanate, 50, 50*t*
Diaspora, 35, 56, 86, 112
Diocletian, 22
Divination, 35
Doctrine, 112
Dome of the Rock, 85*p*
Domestication. *See* Agriculture
Dumuzi, 32, 69

E
Eastern Orthodox Christian Church. *See* Greek Orthodox Christian Church
Ebla, 38–39
Economic history, 3, 111
Edict of Milan, 30*t*, 87
Egalitarian societies, 112
  agriculture and, 3
  depicted in art, 13
  tribal, 31
Egypt
  Alexandria library, 61*t*
  art, 12–13
  battle with Hittites, 45
  Jews exiled from, 53, 84
Eikhorn, 2, 39
Elamites, 98
Emmer, 2, 39
Enkidu, 71
Epics
  Enuma Elish, 32, 59, 61*t*, 69–70, 71
  Epic of Gilgamesh, 59, 61*t*, 70–71, 70*p*
  See also Myths
Equinox, 32, 112
Eras, 111
  Babylonian, 20–21
Euphrates River, xiii, 5
Excavations, 7, 112
  Babylon, 28*p*
  Ebla, 38
  Ur, 107

F
Farming. *See* Agriculture
Fermentation, 101–102
Fertile Crescent, xiii, 2, 39–40
  See also Mesopotamia
Festivals. *See* Rituals
Figurines, 12–13
  Çatal Huyuk, 26
  Mohenjo-Daro, 44
Five Pillars of Islam, 48–49, 88

G
Gardens, Babylon, 18, 19*p*, 27
Gender, agriculture and, 3
Genesis, 59
Geographic features, xiii
Gilgamesh. *See* Epics
Gold coins
  Lydian, 62, 63, 63*p*
  Persian, 76
Gospels, 86
Government
  Assyrian, 67
  Byzantine Empire, 23–24
  Parthia, 74
  Persian Empire, 37, 76–77
  Phoenician, 79–80
  See also City-states; Laws
Grave robbing, 7
Great Schism, 30, 30*t*
Greek Orthodox Christian Church, 30, 30*t*, 88
Greeks
  scientific thinking, 100
  war with Persia, 78
Gutians, 98
Gyges, 62

H
Halys river, 5
Hammurabi, 16, 19*t*, 21, 41–42
  Code of, 21, 41–42, 41*p*, 61*t*, 94
  See also Babylon
Hanging Gardens of Babylon, 18, 19*p*, 27
Harappa and Mohenjo-Daro, 42–45, 44*p*
Hattusilis I, 45
Hebrew **patriarchs**, 22, 48
Hebrew scriptures, 10, 22, 52
  Ten Commandments, 54, 84–85
  Torah, 22, 56, 84, 86*t*
  See also Jews and Judaism; Old Testament
Hejira, 48, 50*t*
Hellenistic culture, 24, 34–35, 112
Herodotus, 91
Hierarchical social structure, 112
  agriculture and, 3, 65
  origins, 93
  Sumer, 96
Hieroglyphics, xiv, 112
Historical inquiry, 7, 111
Historical interpretation and analysis, 7, 111
Historical research, 7, 111
Historical understanding, 12, 111
History of science and technology, 2, 111
Hittites
  conquest of Anatolia, 5
  conquest of Old Babylonia, 19*t*, 21
  culture and society, 45
  decline and fall, 45–46
  destruction of Ebla, 39
Honor, 93
Housing
  Çatal Huyuk, 14, 26
  Harappa and Mohenjo-Daro, 43
  Mesopotamian, 84
  Sumer, 34
Humbaba, 70*p*
Hushang, 72

I
Ice Age, 112
Inanna, 32, 69
India, Islamic, 50, 50*t*
Indian Ocean, 67–68
Indo-European language, 57, 60*m*
Indus River, xiii, 42, 44, 47
Indus script, 43–44
Inscriptions, 112
  Aramean, 6
  Behistun, xv, 7, 11*t*, 58, 61*t*
  Cyrys Cylinder, 77
  Ebla, 39
  Harappa and Mohenjo-Daro, 44
  Mesopotamian, 58
  Phoenicians, 81*p*
  See also Writing
Inventions. *See* Technology and inventions
Ionian Greeks, 78
Iron Age, 112
Ironworking, 100
Iroquois, 71
Irrigation. *See* Agriculture
Isaac, 52
Isaiah, 35
Ishmael, 52
Ishtar, 69
Ishtar Gate, 15–16, 15*p*
Islam
  art and architecture, 14
  beliefs, 48–49
  Dome of the Rock, 85*p*
  Five Pillars of, 48–49, 88
  literacy, 62
  Muhammad, 35, 48, 49, 50*t*, 56, 86*t*, 88
  origins, 88
  prophets, 35, 48
  rise of, 50*t*
  spread of, 49–50
  unifying power of, 87
  See also Muslims
Islamic Arab empire, xv
Islamic Ayla, 10–11, 11*t*
Israel, ancient, 53*m*, 54–56
Issedones, 91

J
Jerusalem, 51
  Babylonian destruction of, 27, 51, 55
  Dome of the Rock, 85*p*

Roman destruction of, 35
Western Wall, 54*p*
Jesus of Nazareth, 22, 28–29, 30*t*, 86, 86*t*
Jews and Judaism, 84–85
Abraham, 52–53, 84
in ancient Israel, 54–56
Babylonian exile, 27, 34, 51, 75, 85, 86*t*
Diaspora, 35, 56, 86, 112
Jesus, 29, 86
laws and customs, 56
prophets, 35, 53
Roman rebellion, 35, 56, 85
tribal, 92–93
See also Hebrew scriptures; Israel, ancient; Jerusalem
John the Baptist, 35
Judah, Kingdom of, 51, 55–56
Judaic scriptures. *See* Hebrew scriptures

K

Kassites, 19*t*, 21
Keyumar, 72
Knab, Ferdinand, 19*p*
Koldewey, Robert, 7, 11*t*
Kopis, 76
Koran, 48
Kütulpe Kanesh, 8, 11*t*

L

Language
Akkadian, 34
Aramaic, 6, 34
Indo-European, 57, 60*m*
linguistic groups, 60*m*
Semitic, 38, 57, 60*m*
spoken, 57
spread of literacy, 60–61
time line, 61*t*
See also Writing
Laws
Code of Hammurabi, 21, 41–42, 41*p*, 61*t*, 94
Darius I, 37
Jewish, 56
Ten Commandments, 54, 84–85
written, 58
See also Government
Libraries, 61, 61*t*
Linguists, 7, 112
Literacy. *See* Language
Lydians, 62–64

M

Maccabees, 55–56
Macedonians, conquest of Anatolia, 5
Madaba, mosaics, 14
Maps
ancient Near East and Southwest Asia, xx
archeological sites, 8*m*
Babylonian Empire, 20*m*
Byzantine Empire, 23*m*
cultural regions, 33*m*
development of writing, 101*m*
Israel in the time of King David, 53*m*
linguistic groups, 60*m*
mosaic, 14
Persian Empire, 73*m*
Phoenician trade route, 80*m*
Marduk, 69–70, 71, 85, 94*p*
Massagetae, 91
Mathematics, 21, 67, 102, 102*t*
Medes, 27, 75
Medicine, 66
Medina, 48
Mehmed II, 24
Merchants, xiv–xv, 3
Mesolithic Period, 113
Mesopotamia, xiii, 65–67
agriculture, 1–4, 65, 102*t*
architecture, 14–16
art, 3*p*, 12–14
civilizations of, 65
cosmology, 69–71
deities, 4, 35, 69, 83, 94*p*
kings, 93–94
language and writing, 57, 58, 61*t*, 100
medicine, 66
myths, 69
recipes, 32
rituals, 83–84
slavery, 91–92
women, 95
See also Akkadians; Assyria; Babylon; Fertile Crescent; Persian Empire; Sumer
Metal **alloys**, 99, 112
Metalwork, 13–14, 40, 99–100
Midas, 62
Mohenjo-Daro. *See* Harappa and Mohenjo-Daro
Monogamy, 91
Monotheistic religions. *See* Religion
Monsoons, 67–68
Mosaics, 14, 105*p*
Moses, 22, 53–54, 84, 86*t*
Mount of Olives, 85*p*
Mountain ranges, xiii, 5
Mughal Empire, 50, 50*t*
Muhammad, 35, 48, 49, 50*t*, 56, 86*t*, 88
Music, Sumerian, 34
Muslims
Abraham, 52, 56
Byzantine crusades against, 24
See also Islam
Myths
creation, 59, 69–70, 71, 72
Persian, 72
Sumerian, 68–69
See also Epics

N

Nabopolassar, 17, 17*t*, 27
Nabu, 94*p*
Naram-Sin, 39
Nebuchadrezzar II, 15–16, 18, 27
See also Babylon
Neolithic Period, 5, 113
Neolithic Revolution, xiii, 113
Neolithic urban settlement, 26
Nineveh, 11*t*, 27
Nomadic peoples, 6, 92
Scythians. *See* Scythians

O

Old Testament, 9*p*, 22, 52
See also Bible; Hebrew scriptures
Orthodox Christian Church. *See* Greek Orthodox Christian Church
Özgüç, Tashin, 8, 11*t*

P

Pactolus River, 62
Paintings, Tower of Babel, 13*p*
Palace remains, 77*p*
Paleolithic Period, 113
Pantheon, 4, 69, 83, 113
Parthian Empire, 74–75
Pastoral nomads, 92, 113
Patriarchal societies, 34, 113
Patriarchs, Hebrew, 22, 48, 84
Patterns of continuity and change, 31, 111
Peloponnesian Wars, 78
Periods, Hittite, 45
Persian Empire
Anatolia conquest, 5
clay writing tablet, 58*p*
cosmology, 72
culture, 34
Cyrus II, 27, 51, 63, 75, 77
Darius I, the Great, 37–38, 58–59, 75–77
decline and fall, 77–78
government, 37, 76–77
growth of, 75
Lydian conquest, 63–64
map of, 73*m*
myths, 69
Neo-Babylonian empire conquest, 19*t*, 75
Phoenicia conquest, 81–82
religion, 67, 84
Royal Road, 76
Shahnama, 72
technology and inventions, 76
time line, 78*t*
Persian Wars, 78, 78*t*
Phoenicians, xv
alphabet, 59, 61*t*, 79, 81, 81*p*, 100
decline, 80–81
government, 80
trade, 79–80, 80*m*
Pictographs, 38, 57, 97, 113
Plow, 4
Plows, 103–104
Political history, 3, 111
Politics, architecture and, 15–16
Polytheistic religions. *See* Religion

Pontus mountains, 5
Postal systems, 66, 76
Pottery wheel, 97, 102*t*, 103
Prehistory, xiii
Priesthood, agriculture and, 4
Primal water, 71
Prophets, 35, 48, 56, 84, 86*t*
Proto-Sinaitic script, 79
Pu-abi, 10

Q
Qanat, 2
Qatna, 11*t*
Qumran, scrolls found at, 9*p*, 10

R
Radiocarbon dating, 7–8, 11*t*, 26, 111
Rawlinson, Henry, xv, 11*t*
Recipes, 32
Reliefs, 7, 113
Religion, xiv
  agriculture and, 4
  animistic, 31, 83, 90, 112
  architecture and, 15
  art and, 14, 24
  Christianity. *See* Christianity
  divination and prophets, 35
  early Mesopotamian, 32, 34
  Islam. *See* Islam
  Judaism. *See* Jews and Judaism
  literacy and, 61
  monotheistic, xiv, 28, 35, 48, 52, 55, 67, 84–88, 113
  polytheistic, 55, 83, 113
  time line, 86*t*
  Zoroastrianism, 34, 67, 72, 84, 86*t*, 108
  See also Deities; Rituals; specific group
Religious persecution, 55, 87
Rituals
  agricultural, 4, 32
  cannibalistic, 91
  Mesopotamia, 83–84
  recipes for, 32
  See also Religion
Rivers, xiii, 5
Roads, Persian, 76
Roman Catholic Church, 30, 30*t*, 87–88
Rome
  Christianity and, 29–30, 55, 87
  colonies, 5
  culture, 35
  war with Parthia, 74–75
Rostam, 72
Royal Standard of Ur, 105, 105*p*
Rugs, 95

S
Sargon the Great, 19*t*, 20, 66, 98
Sassanids, 75
Satraps, 37, 63, 76
Saul (King of Israel), 54
Scientific thinking, 100
Scriptures
  Christian, 22
  Hebrew. *See* Hebrew scriptures
Scrolls, Dead Sea, 9*p*, 10
Scythed chariot. *See* Chariots
Scythians, 90–91
  art, 12, 14, 31, 90
  cultures, 31, 91
  religion, 90
Sea Peoples, 45
Seafaring merchants, xiv–xv
Seals, 94*p*
Secular, 113
Seleucids, 55, 74, 78*t*
Seleucus I Nicator, 78, 78*t*
Semitic language, 38, 57, 60*m*
Semitic peoples, 6, 100, 113
Seven Wonders, Gardens of Babylon, 18, 19*p*
Sewer systems, 42–43
Shaduf, 2
Shahnama, 72
Shamans, 90
Shamshi-Adad I, 16, 17*t*
Shamshir, 76
Shulgi, 98
Siculus, Diodorus, 18
Sidon, 81
Skeletal remains, Çatal Huyuk, 26–27
Slavery, 91–92, 94
Social classes. *See* Social stratification
Social history, 3, 111
Social **stratification**, 113
  agriculture and, 3, 40, 65, 92
  depicted in art, 12–13
  Mesopotamian, 93–94, 96–97
Society
  agriculture and, 2–3, 40
  art and, 12–13
  Harappa and Mohenjo-Daro, 43–44
  tribal, 92–93
  urban, 93–95
Solomon (King of Israel), 55
Standard of Ur, 105, 105*p*
Strabo, 18
Stratification. *See* Social **stratification**
Sumer, xiii, 96–98
  agriculture, 96
  architecture, 14–15, 66, 107
  art, 12–13
  burial sites, 10
  city-states, 65, 96, 98
  cuneiform, 97, 100, 102*t*
  daily life, 32–34
  Epic of Gilgamesh, 59, 61*t*, 70–71
  invasions and decline, 97–98
  myths, 68–69
  religion and beliefs, 31–32
  slavery, 91–92
  society, 93–94, 96–97
  technology and inventions, 97, 103, 106
  writing, 57, 65–66, 100
  See also Mesopotamia; Ur
Swords. *See* Weapons

T
Tabiti-Hestia, 31
Tablets. *See* Writing
Taurus mountains, 5
Technology and inventions, xiv
  agricultural, 2, 4, 40, 99, 103–104
  Babylonian, 21, 67, 102
  Çatal Huyuk, 27
  fermentation, 101–102
  Fertile Crescent area, 40
  Harappa and Mohenjo-Daro, 42–44
  mathematics, 21, 67, 102, 102*t*
  medicine, 66
  Mesopotamian, 65–66
  metalwork, 13–14, 40, 99–100
  Persian Empire, 76
  Sumerian, 97, 103, 106
  time line, 102*t*
  wheel, 40, 97, 102*t*, 103, 106
  writing. *See* Writing
Telipinus, 45
Tell Muqayyar, 9–10
Ten Commandments, 54, 84–85
Textiles, xiv, 113
Tiamat, 69–70, 71
Tidal bore, 47
Tiglath-Pileser, 16, 17*t*, 67
Tigris River, xiii, 5
Toleration, cultures of, 34–35, 75
Tombs
  Darius I, the Great, 38*p*
  Queen Pu-abi, 10
  Umm el-Marra, 11*t*
  See also Burial sites and practices
Tools, 103–104
Torah. *See* Hebrew scriptures
Tower of Babel painting, 13*p*
Trade, xiv–xv
  Ebla, 39
  Harappa and Mohenjo-Daro, 43
  Hittites, 45
  Lydians, 62, 63
  monsoons and, 68
  Parthia, 74
  Persian Empire, 77
  Phoenicians, 79–80, 80*m*
  Sumerian, 96
  urban societies, 95–86
  waterways and, xiii
Tribal cultures, 31, 54–55, 92–93
Tribute, 74, 75, 113

U
Umayyads, 49, 50*t*, 62, 88
Umm el-Marra, 11*t*
Ur, 10, 11*t*, 14, 20*m*, 52, 107
Ur, Royal Standard of, 105, 105*p*

Ur-Nammu, 58, 98
Urban culture, 31–34, 93–95

V
Vassal kings, 16, 17*t*, 113

W
Wall paintings, Qatna, 11*t*
War, xiv
  art depicting, 105*p*
Waterways, xiii
Watery void, 71
Weapons, 104–106
  metalworking and, 99–100
  Persian swords and daggers, 76
  swords and daggers, 76
Western Wall, 54*p*
Wheel, 40, 97, 102*t*, 103, 106
Wheeled carts, 102*t*, 103
Winemaking, 102, 102*t*
Women
  Mesopotamian, 95
  in tribal cultures, 31, 93
Woolley, Leonard, 10, 11*t*, 105
Woven carpets, 95
Writing, 57–58
  Aramaic, 6
  Bogazkoy tablets, 45
  clay tablets, 57–58, 58*p*
  Dead Sea Scrolls, 9*p*, 10
  development and spread of, 101*m*
  Indus script, 43–44
  invention of, xiii, xiv, 40
  Phoenician alphabet, 59–60, 61*t*, 79, 81, 81*p*, 100
  Proto-Sinaitic script, 79
  reasons for, 58–59
  recipes, 32
  See also **Cuneiform**; Epics; **Inscriptions**; Language

Y
Yahweh, 52–54, 84
Yathrib, 48, 50*t*, 88

Z
Zagros Mountains, 102
Zahhak, 72
Zarathustra (Zoroaster), 84, 86*t*, 108
Ziggurats, 13*p*, 15, 66, 83–84, 96, 107
Zoroaster. *See* Zarathustra
Zoroastrianism, 34, 67, 72, 84, 86*t*, 108

Civilizations of Asia and the Pacific

The Ancient World

THE ANCIENT WORLD

CIVILIZATIONS OF

ASIA AND THE PACIFIC

Volume 5

The Ancient World

Civilizations of Asia and the Pacific

Volume 5

GENERAL EDITOR
Sarolta Takács, Ph.D.
Rutgers University

CONSULTING EDITOR
Eric Cline, Ph.D.
The George Washington University

SHARPE REFERENCE
an imprint of M. E. Sharpe, Inc.

DEVELOPED, DESIGNED, AND PRODUCED BY DWJ BOOKS LLC
Principal Author: Kenneth R. Hall

SHARPE REFERENCE

Sharpe Reference is an imprint of M.E. Sharpe, Inc.

M.E. Sharpe, Inc.
80 Business Park Drive
Armonk, NY 10504

© 2007 by M.E. Sharpe, Inc.

All rights reserved. No part of this publication may be reproduced, stored in
a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the copyright holders.

Library of Congress Cataloging-in-Publication Data
The ancient world / Sarolta Takács, general editor; Eric Cline, consulting editor.
p.cm.
Includes bibliographical references and index.
ISBN 978-0-7656-8082-2 (set : alk. paper)
1. Civilization, Ancient--Encyclopedias. 2. History, Ancient--Encyclopedias.
I. Takács, Sarolta A. II. Cline, Eric H.
CB311.A535 2007
930.103--dc22 2006101384

Printed and bound in Malaysia
The paper used in this publication meets the minimum
requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials,
ANSI Z 39.48.1984

TI (c) 10 9 8 7 6 5 4 3 2 1

All images provided by Getty Images and the following:
background image: Colin Samuels/Photonica
inset images (left to right):Harvey Lloyd/Taxi/Getty Images; Dennie Cody/Taxi; Digital Vision; Demetrio Carrasco/Dorling Kindersley; Sylvain Grandadam/Stone

Contents

List of Illustrations vii

Topic Finder ix

Preface xi

Ancient Asia and the Pacific Basin: More Than the Sum of Its Parts xiii

Map of Ancient Asia and the Pacific xvii

Aboriginal Peoples 1

Agriculture 2

TURNING POINT: *Terraced Farming* 4

Angkor Wat 6

Archeological Discoveries 7

TURNING POINT: *Terra-cotta Soldiers* 10

LINK IN TIME: *The Great Wall* 12

Art and Architecture 14

TURNING POINT: *Todaiji Temple* 16

Australia 18

LINK TO PLACE: *Fossils: Australia and the Americas* 20

Buddhism 22

GREAT LIVES: *The Buddha* 25

China 26

TURNING POINT: *Chinese Civil Service* 28

Confucianism 33

GREAT LIVES: *Confucius* 34

Culture and Traditions 36

Golden Horde 40

Hinduism 41

Huns 44

GREAT LIVES: *Attila the Hun—"Scourge of God"?* 45

India 46

Indian Ocean Trade 49

Islam, Spread of 52

Japan 54

TURNING POINT: *The Divine Wind* 57

Java 59

Khmer Empire 60

Korea 61

Language and Writing 64

Mandate of Heaven 69

Melaka 70

Micronesia 71

Mongols 72

ANCIENT WEAPONS: *The Mongolian Bow* 73

Monsoons 76

Myths and Epics 77

LINK TO PLACE: *Indian and Greek Epics* 78

LINK TO PLACE: *Asian Creation Myths* 80

New Zealand 81

LINK IN TIME: *Maori Culture: Ancient and Modern* 82

Pax Sinica 84

Polynesia 85

Religion 87

TURNING POINT: *Reincarnation* 89

TURNING POINT: *Indian Temples and Temple Worship* 91

Shinto 93

Silk Road 95

Slavery 96

Society 97

ANCIENT WEAPONS: *The Japanese Samurai Sword and the Javanese Kris* 98

Spice Trade 101

Sri Lanka 102

Sukhothai and Ayudhya 103

Technology and Inventions 104

TURNING POINT: *The Concept of Zero* 106
TURNING POINT: *The First Seismograph* 108

Tools and Weapons 109

Vietnam 111

Zheng He (ca. C.E. 1371–1433) 112

Glossary 114

Selected Bibliography 117

Index 122

List of Illustrations

Time Lines

Archeological Discoveries 9

Rise of Australia 22

Milestones in Ancient Chinese History 27

Origins and Growth of Hinduism 42

Milestones in Ancient Indian History 47

Milestones in Ancient Japanese History 55

Rise and Decline of the Khmer Empire 61

Language and Writing 65

Technology and Inventions 105

Maps

Ancient Asia and the Pacific, ca. 3000 B.C.E. xvii

Major Archeological Sites of Asia and the Pacific 11

Migratory Routes of Aboriginal Peoples to Australia and Pacific Migrations 21

Chinese Dynasties, 1122 B.C.E.–C.E. 1365 31

International Trade Routes of the Peoples of Asia, ca. C.E. 1500 50

Major Linguistic Groups of Ancient Asia and the Pacific 68

Mongol Empire at Its Greatest Extent, ca. C.E. 1300 74

Major Asian Religions Before C.E. 1500 92

The Spread of Technology 107

Photos

Rice terraces 3

Hindu temple complex 7

Terra-cotta soldiers 10

Australian rock art 19

Statue of the Buddha 23

Grand Canal of China 29

Henna-painted hands 37

Hindu deity 43

Attila the Hun 45

Tosho-gu Shrine 58

Lanterns showing Japanese characters 66

Tale of Genji illustration 79

Maori church façade 83

Temple in India 90

Shinto shrine 94

Brahmin caste member 100

Early Chinese paper money 106

Fourteenth-century armor 110

Topic Finder

Agriculture
Culture and Traditions
Mandate of Heaven
Religion
Slavery
Society
Technology and Inventions
Tools and Weapons

Civilizations and Peoples
Aboriginal Peoples
Huns
Khmer Empire
Mongols

Culture and Language
Archeological Discoveries
Art and Architecture
Culture and Traditions
Language and Literature
Myths and Epics

General Topics
Agriculture
Archeological Discoveries
Art and Architecture
Culture and Traditions
Indian Ocean Trade
Language and Literature
Mandate of Heaven
Monsoons
Myths and Epics
Pax Sinica
Religion
Silk Road
Slavery
Society
Spice Trade
Technology and Inventions
Tools and Weapons

Notable Figures
Attila the Hun (*see* Huns)
Buddha (*see* Buddhism)
Confucious (*see* Confucianism)
Zheng He

Places
Angkor Wat
Australia
China
India
Japan
Java
Korea
Melaka
Micronesia
New Zealand
Polynesia
Sri Lanka
Sukhothai and Ayudhya
Vietnam

Periods and Events
China
India
Japan
Khmer Empire
Korea
Mandate of Heaven
Pax Sinica

Religion
Buddhism
Confucianism
Hinduism
Islam, Spread of
Religion
Shinto
Society and Way of Life

War and Military Affairs
China
Golden Horde
Huns
Mongols
Tools and Weapons

Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

Ancient Asia and the Pacific Basin: More Than the Sum of Its Parts

Early Asian civilizations developed through a combination of human migrations, local innovations, and the adaptation of customs and beliefs from more advanced societies. The initial spread of civilization in Asia and the Pacific Basin resulted from migrations of early **humanoids** from Asia to Southeast Asia to Australia in roughly 55,000 B.C.E., followed by another wave of aboriginal settlers from Asia some 35,000 years later. **Maritime** travelers, originally based in south China, the Philippines, and Taiwan, settled the eastern Indonesian **archipelago** about 10,000 B.C.E. By about 1500 B.C.E., they began to migrate farther east to the Pacific Islands.

Most ancient Asian and Pacific Island societies began as nomadic hunting-and-gathering and sojourning bands that eventually adopted a settled agricultural lifestyle. These early agricultural communities formed the foundations for more complex, centralized societies of Asia's major premodern powers, India and China. From India, Hindu and Buddhist civilization spread to Tang-**era** China (C.E. 618–907), where it blended with China's earlier Confucian tradition. This tradition in turn led to the development of imperial neo-Confucian traditions in neighboring Korea, Japan, and Vietnam.

PREHISTORY

The earliest evidence of human habitation in Asia is the remains of *Homo erectus,* a human ancestor who walked upright and used tools, including fire, dating to roughly one million years B.C.E. Discovered in China's southwestern Yunnan Province in the 1980s, these remains are some 100,000 years older than similar ones found on the Indonesian island of Java in 1891, which were dubbed "Java Man." By the time modern *Homo sapiens* appeared in Asia (between 70,000 and 20,000 B.C.E.), humans inhabited most of the continent.

In 70,000 B.C.E., Asia was joined to both North America and Australia by land bridges. By 40,000 B.C.E., early *Homo sapien* hunters and gatherers migrated from Southeast Asia to the Lake Mungo region in what is now southeastern Australia. Some 10,000 years later, the ancestors of Australia's aboriginal peoples migrated to the southern and eastern parts of the island continent. Ancestors of these early immigrants still inhabit the highlands of India, China, Taiwan, and Hokkaido Island in Japan. Between 15,000 and 10,000 B.C.E., northern Asian populations also traveled east to settle in what is now North America.

By 10,000 B.C.E., the land bridges had disappeared, covered by rising sea levels triggered by the end of the most recent **Ice Age**. Australia and the islands of the Pacific became isolated from the mainland and its surrounding islands, such as Japan, the Philippines, and Indonesia. As a result, the cultures of the two regions developed along significantly different lines. For example, while most mainland populations had adopted a settled agricultural lifestyle by 1000 B.C.E., Australian aborigines remained a hunting-and-gathering society until the arrival of European settlers in the late 1700s C.E.

THE LAND AND ITS PEOPLE

Asia is by far the world's largest continent, almost half again the size of Africa and larger than North and South America combined. Its great expanses consist of large swathes of fertile land broken by vast stretches of some of the world's most difficult and hostile terrain. China, for example, not only features productive coastal areas and the fertile valleys of the Yellow and Chang rivers but also the forbidding Gobi and Taklimakan deserts in the northern and western parts of the country.

Settled agricultural communities appeared in the river valleys of China and India before 4000 B.C.E., in Southeast Asia by 2000 B.C.E., and in Japan shortly after 1000 B.C.E. These early farming societies cultivated dry rice, or millet, as their staple grain. By around C.E. 1000, communities had switched to the cultivation of wet rice, originally developed in mainland Southeast Asia. These settled cultures eventually evolved into the continent's first centralized states: China's Shang dynasty (1766–

1122/1027 B.C.E.), the Mauryan kingdoms in India (ca. 400–180 B.C.E.), and the early Korean kingdoms sometimes referred to as "Old Choson" (late fourth century B.C.E.).

Nomadic and **seminomadic** peoples inhabited the peripheries of the settled civilizations, interacting with and often profoundly shaping those agricultural societies. Around 1600 B.C.E., seminomadic Aryan tribesmen from southern Russia's steppe grasslands entered India through the Hindu Kush mountain passes. The resulting mixture of Aryan and existing local Indian cultures produced both the Hindu faith, which predominates in India to this day, and India's caste system, a social **hierarchy** that separates classes by degrees of ritual purity. Social influence, however, traveled in both directions. In the thirteenth century C.E., the nomadic Mongols from the steppes of central Asia conquered virtually the entire continent except for India, Japan, and Southeast Asia. Mongol rulers, however, readily adapted to and often adopted the cultural and religious practices of the societies they conquered. Local culture changed the Mongols more than the Mongols changed local culture.

EARLY PEOPLES AND CIVILIZATIONS

Natural barriers such as seas and mountain ranges encouraged the evolution of distinct societies in the various regions of Asia and the Pacific. In time, many of these separate societies contacted one another, sharing beliefs and practices and creating elements of a common culture. The popularity of Buddhism in India, China, Japan, Korea, and Southeast Asia is one example of a local cultural practice that spread widely by social exchange. Other societies, such as the Australian aborigines and the Polynesians and Micronesians of the Pacific, developed unique cultures as a result of their isolation from mainland Asia.

China

In China, the Shang were the first in a series of imperial dynasties that oversaw the growth and consolidation of the Chinese state. The succeeding Zhou **dynasty** (1122/1027–221 B.C.E.) was a time of intellectual development. It was during this era that the philosopher Confucius spread his notions of the importance of orderly social behavior. Confucianism soon evolved into the guiding principle of Chinese **secular** political authority and administration.

Early Chinese history was marked by periods of stability broken by periods of disorder and chaos. In 403 B.C.E, the Zhou dynasty collapsed, leading to the so-called "Era of the Warring States," which ended in 222 B.C.E., when the Qin state emerged as the victor. Likewise, the fall of the Han dynasty (206 B.C.E.–C.E. 220) triggered 350 years of turmoil until the Sui dynasty (C.E. 581–618) reestablished imperial authority. Similar disruptions in central rule occurred again in the early 900s and in 1279, when the nomadic Mongols conquered China. The Ming restored ethnic Chinese rule in 1368, and China retained a traditional imperial structure until the early twentieth century.

India

Like China, India struggled with internal divisions and waves of invasion. By 600 B.C.E., several competing kingdoms had arisen in India, as had Buddhism, an alternative to the dominant Hindu religious tradition. The Mauryan kingdom, which emerged as north India's preeminent culture by 400 B.C.E., adopted Buddhism and its more inclusive social **doctrines**. The collapse of the Mauryan state about 180 B.C.E. was followed by a series of invasions from the northwest that continued until the early fourth century C.E. Among the attempted invaders was the Macedonian emperor Alexander III, the Great, who, in the 320s B.C.E., brought Greek culture to India's northwestern frontier but failed in his attempt to add India to his vast empire.

Alexander's death in 323 B.C.E. led to the collapse of his empire and a transitional period during which the Greek invaders competed for control over northwest India with the Asia-based Scythians and the Iran-based Parthians while numerous Indian rulers held authority over all the Gangetic plain. The Gupta Empire (ca. C.E. 320–550), claiming descent from earlier Mauryan rulers, finally restored central authority and reinstated Hindu social and religious practice in north India. The fall of the Gupta rulers was followed by a period of competition

among small regional states in the north, which ended with the arrival of Islamic invaders in the second millennium C.E., leading to 500 years of Muslim rule over the north Indian heartland that was the home of Buddhism and Hinduism. South India was ruled by the Cera, Cola, Pandya, and Pallaum original Hindu dynasties from C.E. 600 and was never subject to Muslim rule.

Southeast Asia and Japan

Centralized kingdoms developed much later in Japan and Southeast Asia. In Japan, the Yamato emerged about C.E. 400 as the most powerful of a group of local clans and consolidated their power into imperial rule. Power shifted among competing clans until the late twelfth century, when imperial authority collapsed. After this time, a series of military leaders, known as *shoguns,* wielded power in Japan, exercising their authority over a network of regional clans. This system led to frequent struggles between competing clans for control of the shogunate. Although torn by internal rivalry and infighting, Japan avoided invasion despite several attempts by Chinese Mongol emperors in the thirteenth century. Nevertheless, Japan was receptive to outside cultural influences. Early Japanese society borrowed heavily from China, including the importation of Buddhist and Confucian ideas in the seventh century C.E.

In Southeast Asia, early regional Hindu kingdoms arose in what is now Cambodia in the mid-sixth century. Shortly after 800, King Jayavarman II began the process of **assimilating** these states into a Khmer Empire centered at Angkor. Thai armies conquered the Khmer Empire in 1431 after more than 100 years of periodic conflict. Vietnam was under periodic Chinese rule until 960, when the Ly state established the Buddhist-Confucian kingdom. This realm was the target of repeated Chinese **annexation** attempts thereafter.

Australia and the Pacific Islands

Because of their isolation, Australia and the Pacific islands developed along paths that were quite different from those in the remainder of Asia. The islands that comprised Micronesia and Polynesia developed a wide range of political organizations. Some were ruled by a supreme chief; in others, a local chief shared power with heads of family clans; still others were ruled by a group of roughly equal confederated chiefs. In Australia, by contrast, no central government of any type emerged among the aboriginal population, which remained organized in small nomadic bands. Australia and the Pacific islands developed cultures unique from those of the mainland, remaining isolated from cultural influences such as Buddhism, Hinduism, and Confucianism.

ASIA IN TRANSITION

In the early fifteenth century C.E., the new Ming emperors, who had come to power in China in 1368, sent the admiral Zheng He and his fleet of Chinese battleships and troop transports to assert China's interests across the entire Indian Ocean (1405–1433). Zheng He eliminated pirates and promised military assistance, continuing Chinese support for local political regimes that guaranteed the regular flow of international products from the Middle East to China. Partly in response to the Ming initiatives, the fifteenth century in Asia witnessed substantial increases in trade volume, participants, and the diversity of traded commodities. Among these were Indian cotton and Chinese and Japanese silk; Chinese, Thai, and Vietnamese ceramics; and Indonesian spices. In this age, conversions to Islam increased, especially among the multiethnic populations who were based in a network of Indian Ocean ports and who became the most prominent among Indian Ocean traders. As Ming interest in being directly involved in Indian Ocean affairs diminished in the 1430s, the international trade re-centered in the Melaka international marketplace, which became the critical intermediary in East–West trade. There international traders exchanged Middle Eastern and Indian products for Southeast Asia's spices and China'a silks and porcelain. This prosperity attracted the attention of Europeans, who had previously had little direct contact with the Indian Ocean realm.

The European presence in Asia changed dramatically in the early sixteenth century, however. At that time, advances in shipbuilding and navigation (some, ironically, imported from Asia) enabled

European sailors to explore the open oceans, opening new routes to Asia. In 1498, Portuguese explorer Vasco de Gama became the first European to sail directly to India around the Cape of Good Hope at Africa's southern tip. Twelve years later, the Portuguese military established a trading port at Goa on India's southwestern coast.

Goa was only the first of many Asian regions to fall under European domination or outright control during the next 400 years. By 1900, all of India and most of Southeast Asia had become European colonial possessions. China, although nominally independent, was carved up into economic spheres of influence by leading European powers and the United States, and was politically powerless. Imperial Russia annexed large tracts of central Asia and Siberia, while Great Britain claimed the entire continent of Australia. The United States joined with European countries and Japan in gaining control over most of the Pacific islands as well. Japan and Siam (modern Thailand) remained the only independent states of note.

CONNECTIONS TO TODAY

Like many other former colonies around the world, most Asian nations regained their independence following World War II. However, these new states were shaped strongly by ideas of **secularism** and representative government, which had gained popularity in the West during the nineteenth and early twentieth centuries. Most of the new states shunned the close ties with religious orders that had characterized ancient Asian governments. In fact, in Communist states such as China, government was actively hostile not only to religious influence but also to traditional social organization. China's Communist rulers rejected the Confucian system that had been in place for more than 2,000 years and tried to replace it with nineteenth-century Marxist **doctrines** imported from Europe.

Despite these changes, ancient social and cultural beliefs and practices continue to influence the lives of many Asians today. For example, although India is a secular state, most Hindus still observe the caste system, which plays an important role in determining occupation and social status. Also, although Japan has embraced Western education, style, and technology more enthusiastically than any other Asian nation, its traditional customs are remarkably resistant to Western influence. For thousands of years, Asia's people have absorbed, adapted, and transformed outside influences—a process that continues throughout the region to this day.

FURTHER READING

Basham, A.L. *The Wonder That Was India*. New York: Grove Press, 1959.

Bellwood, Peter. *Conquest of the Pacific: The Prehistory of Southeast Asia and Oceana*. Oxford: Oxford University Press, 1979.

Ebrey, Patricia Buckley. *China: A Cultural, Social, and Political History*. Boston: Houghton Mifflin, 2006.

Lieberman, Victor. *Strange Parallels. Southeast Asia in a Global Context,* 800- 1830. Cambridge, UK: Cambridge University Press, 2003.

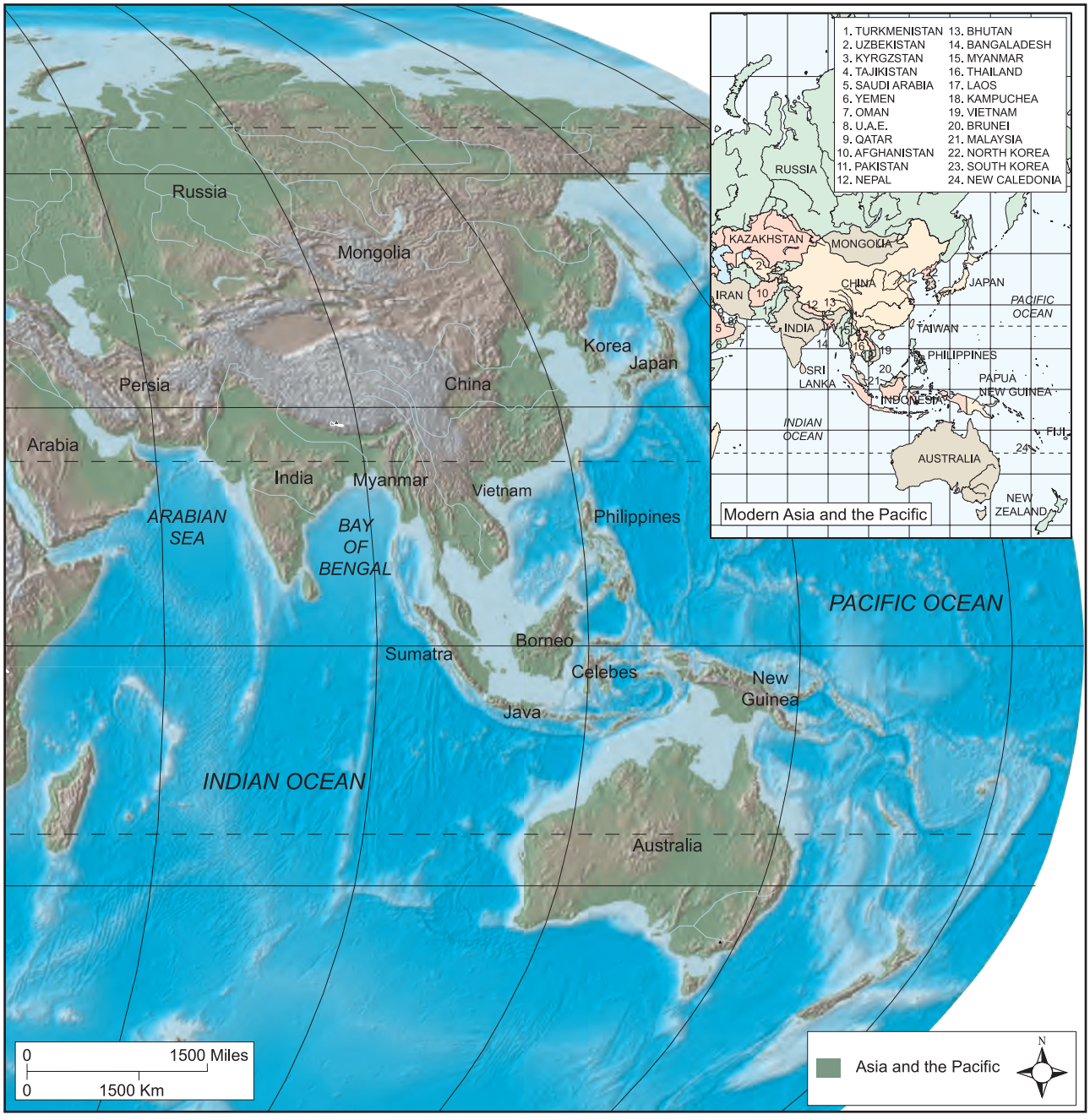
Roberts, J.M. *Prehistory and the First Civilizations*. New York: Oxford University Press, 2002.

Kenneth R. Hall

Map of Ancient Asia and the Pacific

ANCIENT ASIA AND THE PACIFIC, CA. 3000 B.C.E.

The vast Central Asian plateau, centered on Mongolia, has served as a highway for commerce and conquest since ancient times. It formed the heart of the the famous Silk Road trade route that joined ancient Rome and Han China in the second century B.C.E. It was also home to nomadic warriors such as the Mongols, Aryans, and Huns, whose movements and invasions dramatically shaped the course of Asian history.



Aboriginal Peoples

Hunting-and-gathering and simple agricultural cultures, which date back to 20,000 B.C.E. and whose modern descendants represent the last primitive inhabitants of the Indian Ocean and Asian Pacific basins. The origins of most aboriginal cultures are unclear, but those that have survived were pushed from fertile lands into less productive ones by migration and invasion. Small groups of these societies still live in rugged and less-accessible areas in a number of modern Asian and Pacific nations.

Original aboriginal societies were based on the family, usually in cooperation with other, neighboring families who together formed a tribal band. The group survived by a combination of small-scale agriculture, hunting, and gathering of wild grains and vegetables. Economic activity was seasonal, with hunting taking place around the schedule of planting and harvesting. Males typically were responsible for hunting and fishing, whereas females and children gathered fruits, grains, and vegetables from the surrounding countryside. The normal diet consisted of cultivated and wild grains (including rice), roots and tubers (tapioca and yams), beans, coconuts, fruits, and vegetables. The aboriginal peoples supplemented their diet with small game and domesticated animals including chicken and pigs.

Although they possessed a relatively simple material culture, aboriginal peoples did develop technology with which to exploit the environment. Agricultural implements used by aboriginal groups included digging tools made of deer horn, bone, wood, stone, and metals such as bronze, tin, and iron. Hunters often used spears or arrows coated with poison made from the roots and stalks of local plants. They also employed snake venom or the poisonous stingers or skin covering of fish such as the stingray. Many aboriginal shelters featured wood plank floors, some substantially elevated above the moist or frozen soil below, which offered protection against not only the elements but also predators such as snakes, insects, and wild animals.

Aboriginal religions were **animistic**, centered on the belief that spirit forces control the realm of nature and were the source of a society's well-being. Frequently, both men and women in aboriginal societies tattooed their bodies as a form of protection against possession by harmful natural spirits. Tattoos also served as marks of personal accomplishment and social status.

Today, aboriginal cultures still cling to a precarious existence in Asia. They include the inhabitants of Australia's interior desert region known as the Outback; Adavasi tribal populations in the mountainous regions of northeastern India such as Assam; the Ainu, who live in Japan's Hokkaido island frontier; the Xungen people of China's mountains and

deserts; and assorted semi-isolated mountain and jungle dwellers scattered across Taiwan and Southeast Asia. These aboriginal communities remain distinct in many ways from the majority populations of their countries, such as in the use of languages that are not written but have rich oral traditions.

See also: Agriculture; Archeological Discoveries; Australia; Japan; Monsoons; Myths and Epics; Tools and Weapons.

FURTHER READING

Blusse, Leonard, and Natalie Everts, eds. *The Formosan Encounter: Notes on Formosa's Aboriginal Society.* 2 vols. Taipei: Shung Ye Museum of Formosan Aborigines, 2000.

Fitzhugh, W. *Ainu: Spirit of a Northern People*. Seattle: University of Washington Press, 2004.

Morrison, Kathleen D., and Laura L. Junker, eds. *Forager-Traders in South and Southeast Asia*. Cambridge, MA: Cambridge University Press, 2002.

Agriculture

The ready availability of productive land in premodern Asia, combined with the general underpopulation of the Asia-Pacific region before C.E. 1500, shaped the pattern of agricultural development there. As the result of natural catastrophes, climate change, or conflict with neighboring groups, Asians frequently moved from less fertile to more productive yet unoccupied areas.

The earliest evidence of settled agriculture in Asia dates to roughly 20,000 B.C.E. Millet, or dry rice, sorghum (grain-producing grasses), and other natural dry zone grains (wheat, barley, and rye) predate wet rice as the **staple** grains in the early densely settled river plains of northern India and China. Archeological evidence demonstrates the initial cultivation of millet in northern China around 8500 B.C.E. and its widespread cultivation by 5000 B.C.E.; people in India's Indus Valley were growing millet by 4500 B.C.E.; millet cultivation in Japan and Korea did not begin until 1000 B.C.E. Millet (dry rice) and *sawah* (wet rice) cultivation were incompatible. As sawah production spread from mainland Southeast Asia to southern China and then to other neighboring regions in the first millennium C.E., it replaced millet production wherever there was sufficient water and a favorable climate.

EARLY SHIFTING CULTIVATION

Humans initially cultivated millet in the Asian highlands in order to avoid the seasonal flooding in the lowland river basins. Asian farmers used what is commonly called "slash-and-burn," "shifting," or swidden ("burned field") cultivation. Swidden cultivation is a rotational system in which living vegetation is cut in early winter, dried during the dry months, and burned late in the dry season, and a crop of rice, corn, bananas, and a wide range of other vegetation is planted in the fertile ash. Early swidden farming used few agricultural tools. Planting usually involved making holes in the ground with pointed sticks and placing two or three seeds in each hole; the plow was not used. Crops often were harvested by hand, without the use of a blade. Although they did not need draft animals, most villagers kept dogs, chickens, and pigs. Nevertheless, most of their animal protein came from fish and wild game.

Swidden cultivation required shifting cultivation cycles because rain rapidly washed away the nutrients that were added to the soil in the initial burn off. After two harvests a field was allowed to lay fallow (unplanted) for at least 10 years in order to replenish the nutrients in the soil, after which the cycle was repeated. In about 50 years, declining soil productivity would force swidden cultivators to move elsewhere to clear and burn new highland forests. Then, perhaps after a 50- or 100-year interval, they might return to their original land, which by that time would be reforested and ready to clear once more.

The cultivation of dry rice, or millet, eventually gave way to wet-rice agriculture in the southern regions of ancient Asia that had plentiful seasonal rainfall. Wet rice was better suited to planting on hillside terraces, such as those shown in the photo above. (Keren Su/Lonely Planet Images/Getty Images)

Shifting cultivation of rice by small human bands was ideal for sloping highland areas with adequate drainage and little likelihood of flooding. It required little labor and produced a substantial food surplus relative to the size of the workforce. Slash-and-burn regions could usually produce a stable food supply, but local migration cycles, together with the relatively low yield per acre, limited highland population density to 20 to 30 persons per square mile (2.6 sq km) and made it difficult to pool significant surpluses.

The transition from upland shifting to lowland settled cultivation, which was well underway in India and China by 3000 B.C.E., may have been caused by population pressure. This move was supported by new technology such as improved tools, better water management, and a calendar, in use in China by 2637 B.C.E., which took advantage of seasonal cultivation. In this initial phase of agricultural transformation, millet and other traditional grains were cultivated by settled and increasingly populous village societies, which were sustained by the rich **alluvial**, or sediment rich, soils on the plains of the Indus, Ganges, and Yellow rivers.

WET-RICE CULTIVATION

It is generally believed that wet-rice cultivation became common in Southeast Asia, central and southern China, coastal southern Asia, Sri Lanka, southern Japan, and southern Korea during the first millennium C.E. Initially, in Thailand, Cambodia, and Vietnam, wet-rice seeds were distributed at the beginning of the monsoon season on a ploughed floodplain that had been subdivided into small fields bordered and contained by elevated earth, a

TURNING POINT

Terraced Farming

Throughout the Asia-Pacific region, mountainous regions have been reshaped over the centuries into terraced pond fields, especially to grow wet rice. Terraced farming in upland regions of China, Southeast Asia, and elsewhere was a response to landscapes that had very little flat land for agriculture. It was also a practical response to Asia's heavy seasonal monsoon rains. Terraces protected naturally fertile lowlands from harsh flooding, stopped monsoon rainwater from running freely down the hillsides, and stored enough water to support successful wet-rice farming. Water from the upper terraces made its way, by the force of gravity, to each succeeding terrace level, in a carefully controlled flow from hilltops to the valleys below.

Regional rice-growing cycles created a regular cycle of planting and harvesting that shaped the calendar of human events. These annual cycles reinforced a conservative and group-oriented approach to social organization, marked by commitment to a central cultural authority, an emphasis on group welfare over the needs or desires of individuals, and a preference for cultural continuity over change.

Historians debate whether terraced agriculture, and irrigated wet-rice agriculture as a whole, required the efforts of a well-organized and hierarchical "hydraulic" society, and whether it contributed to the development of early centralized political systems. In a "hydraulic society," the great majority of individuals are subordinated politically and ritually to those who build and maintain the terraces, water canals, and storage tanks that comprise the water management system. In such a society, the needs of the individual are secondary to the welfare of the group. The social system reflects the natural hierarchical structure of terraced farming, with both water and power flowing from top to bottom.

practice called bunding. The rice matured after the annual flooding of monsoon-swelled rivers and lakes filled the terraced fields with water. The wet-rice crop grew quickly, needed little work, and was harvested after the floodwaters receded.

Other cultures of Asia adapted a more labor-intensive seeding method that was developed in the Champa regions of central and southern Vietnam in the first centuries C.E. In this method, farmers sowed seed in small flooded seedling beds before, rather than at the beginning of, the rainy season. While the seedlings took root, farmers and their families prepared nearby bunded fields, weeding and breaking up the soil with hoes until the monsoon rains came. Farmers then transplanted the seedlings by hand, leaving enough space between them for each plant to grow.

Both types of sawah cultivation systems depended on capturing the nutrient-rich dissolved matter in the annual floodwaters or irrigated water. Farmers therefore took special measures to minimize the loss of water through the soil. To the already rich layers of soil, farmers added fertilizer, such as water buffalo and duck excrement. They then used wooden and, later, metal-tipped plows to turn over the existing mulch, transforming the flooded soil into a creamy mud 12 to 20 inches (30.5 to 51 cm) deep. Using water buffaloes, they then ploughed the irrigated fields to make the land suitable for the reception of seeds and seedlings.

One limitation of sawah cultivation is that the soil becomes more acidic as it dries out. This reduces the soil's ability to retain nitrogen, which is vital to a maturing wet-rice crop. Farmers adapted to these conditions by developing a range of different rice varieties, from those with an 80-day growing period (for lands that were moist much of the year and allowed double and even triple harvests) to ones with a growing period as long as 270 days (for lands that had unpredictable annual rainfall).

Proper irrigation was another key to success in sawah cultivation. Bunded-field farmers generally

made small canals to spread wet-season floodwater more evenly over their fields. In some areas, temporary channels and water wheels diverted water for gravity-fed irrigation. Farmers collected runoff water in large ponds for domestic use during the dry season; such ponds were especially associated with temples. In a few areas, such as China, Java, Cambodia, Vietnam, and Sri Lanka, ancient regional canal networks are still used today. Terracing, which involved the elaborate construction of level bunded fields on mountainsides, allowed productive wet-rice cultivation of otherwise marginally productive hills and mountains. Terrace farmers channeled rainy season water from highlands to lowlands by a network of dams and canals.

The seedling method gave higher yields per unit of land used but did not yield the highest amount of food based on the amount of work required. By either the broadcast or seedling method, a productive wet-rice farmer could normally expect an annual output of 20 to 25 bushels of grain per acre (20 to 25 bushels per 0.4 hectare). A field of two and one-half acres (one hectare) could support a household of approximately 10 to 20 people and still provide an additional surplus. In early times, one rice crop proved adequate to supply local needs. However, a second could be harvested with the available technology if the weather was good, irrigation and water storage facilities were available, and there were incentives to produce a surplus for external consumption.

To prevent cultivated fields from returning to the wild state, a grassland periphery was commonly maintained around cultivated fields. This served as a border against the forest as well as a buffer against enemies and wild animals. Settled agriculturalists also used fire to maintain the border between sawah and swidden zones of habitation. The old, taller grasses that burned were replaced by shorter, younger varieties that provided more nutritious grazing fodder for livestock.

AGRICULTURE AND EARLY CIVILIZATION

There were three food staples in the sawah regions of Asia: rice, fish, and coconut. Rice production was affected by periodic disease, rodents, and insects. Fish and coconut, however, were virtually free of pests and diseases. Properly prepared, rice and fish—the latter usually dried or fermented—could be stored for more than a year. Coconuts (the source of fruit, sugar, oil, and palm wine) could not be stored as long, but were available at three-month intervals.

Most people ate rice, whether dry or wet, in preference to other grains or starches. Reliance upon other staples was socially unacceptable, except during rice famines when sawah cultivators could normally turn to root crops (such as taro and tapioca, grown as supplemental crops in sawah areas) and yams (gathered from nearby forests or cultivated in rain-fed fields). Sago palms were another alternate source of starch. During the dry season, local populations grew a variety of vegetables, such as beans, tomatoes, and peppers, to supplement their normal rice diet. Early Asian rice cultivators also supplemented their diet by networking with highland hunters and gatherers, both to reduce the highlanders' inclination to raid their villages and to exchange their diverse agricultural produce for forest products (such as woods, bamboo, and lacquer) and meat.

Urbanization in the early sawah regions was the exception rather than the rule, despite its potential for high productivity. In part this was due to cultural preference, the geographical isolation of the productive regions, and the intensive labor demands of wet-rice cultivation.

Control or protection of access to water was an important issue, with social and political consequences. In regions where rainfall was plentiful, where there were multiple water sources useful for irrigation, or where there was no threat from outsiders (such as raids by hill populations and seminomads from the grassland steppes) there was little need or opportunity for a political elite to manage or dominate the water system. But, where there was a limited water source, or where there was a need to coordinate water management (such as building regional dike networks to contain and manage destructive seasonal flooding), political development was likely.

See also: Aboriginal Peoples; Angkor Wat; Archeological Discoveries; Australia; China; Culture and Traditions; India; Japan; Java; Korea; Micronesia; Monsoons; Myths and Epics; Society; Technology and Inventions; Tools and Weapons; Vietnam.

FURTHER READING

Bellwood, Peter S. *The First Farmers: The Origins of Agricultural Societies*. Malden, MA: Blackwell, 2005.

Lansing, J. Stephen. *Priests and Programmers: Technologies of Power in the Engineered Landscape of Bali*. Princeton, NJ: Princeton University Press, 1991.

Rawski, Evelyn S. *Agricultural Change and the Peasant Economy of South China*. Cambridge, MA: Harvard University Press, 1972.

Ancestor Worship

See China; Culture and Traditions; Japan; Society.

Angkor Wat

Hindu temple complex that, along with the accompanying temples of Angkor, formed the ritual and political center of the Khmer kingdom of Angkor (c.e. 802–1432) in what is now Cambodia. These included a series of pyramidal commemoration temples (dating from the reign of Yasovarman I [r. 889–900], all of which recognize the royal patron deity Siva). The spectacular remains of these ancient temple complexes are located north of Cambodia's Tonle Sap, or Great Lake, and surrounded by the fertile wet-rice–producing heartland of the powerful Angkor realm.

Angkor Wat, the most renowned example of ancient Khmer architecture, honors Visnu, the Hindu deity of goodness and mercy. King Suryavarman II (r. 1113–ca. 1150) built the temple to commemorate his **deified** ancestors and proclaim his rule at the center of the universe. Angkor Wat was intended to be the earthly recreation of Mount Meru, the **celestial** home of the gods. Its five towers represent heavenly Mount Meru and the four surrounding mountain peaks.

Angkor Wat consists of five focal towers surrounded by a 660-foot-wide (200-m-wide) rectangular outer moat. The approach to the towers crosses a causeway over the moat and proceeds through two terraced courtyards, each framed by galleries covered in carved **reliefs**. The outer gallery wall carvings depict kings giving orders to their soldiers and **courtiers**, scenes from mythical Hindu epics and texts, and celestial women, or *apsaras*.

The Angkor Thom Bayon was a later Mahayana Buddhist ritual complex built by Jayavarman VII (r. 1181–ca. 1218), who restored the Angkor realm following a devastating 1177 invasion from the neighboring Champa kingdom in what is now central Vietnam. The Bayon Buddhist shrine was the sacred ritual center of Jayavarman's newly constructed Angkor Thom capital city that lay just to the north of the Angkor Wat ritual complex, which had been plundered and desecrated by the Chams several years before.

The entire Angkor Thom complex is surrounded by a high wall and is enclosed by a 330-foot-wide (100-m-wide) rectangular moat that is crossed by five causeways, each of which leads to a gate. The causeways are guarded by stone Cham and Khmer warriors who hold a snake, or *naga* (serpent spirit), rope. Together these represented the sacred connection between the secular world of humans and the celestial Angkor Thom temple complex: the warriors signify the world of humans and the snakes the world of the divine. Each of the gateways, as well as the three towers of the Bayon, bears four massive sculpted heads that face in each of the cardinal directions. The heads represent the realm's new patron deity, the *bodhisattva* (or saint) Avalokitesvara. According to local belief, this bodhisattva of compassion can plead humanity's case with the divine Lord Buddha or directly intervene on humankind's behalf.

North of the Bayon shrine, the Angkor Thom royal palace complex included older ancestral temples and royal residences, and a substantial parade

The ancient Hindu temple complex at Angkor Wat, in modern Cambodia, was built in the early twelfth century C.E. as the new ritual center. Angkor Wat was the ritual center of the powerful Khmer kingdom of Angkor (C.E. 802–1432).(Colin Samuels/Photonica/Getty Images)

ground that was framed on one side by the palace walls. One of the most impressive segments of these walls, at the base of the royal reviewing platform, is covered with life-sized reliefs of the royal elephant corps. Other segments contain larger-than-life depictions of mythical creatures, which, together with the Bayon's celestial Buddhist shrine, helped ensure the success of the renewed Angkor realm.

See also: Buddhism; Hinduism; Khmer Empire.

FURTHER READING

Coe, Michael D. *Angkor and the Khmer Civilization*. London: Thames and Hudson, 2005.

Ortner, Jon, Ian W. Mabbett, et al. *Angkor: Celestial Temples of the Khmer*. New York: Abbeville Press, 2002.

Archeological Discoveries

Archeological sites in Asia and the Pacific document the earliest appearance of human ancestors outside of Africa. They also shed light on the transition of hunting-and-gathering societies into settled **agrarian** communities and then their progression to becoming urban communities and temple centers.

HUMAN EVOLUTION

The earliest evidence of human habitation in Asia is the remains of *Homo erectus,* a human ancestor who walked upright and used tools including fire, dating to roughly one million years B.C.E. Discovered in China's southwestern Yunnan Province in the 1980s, these remains are some 100,000 years older than similar ones, dubbed "Java Man," that were found on the Indonesian island of Java in 1891. At that time this was the earliest find of *Homo erectus* remains beyond Africa.

Other discoveries during the twentieth century confirmed that the *Homo erectus* species was widespread in Asia by 500,000 B.C.E. This was the date of "Beijing Man," discovered near Beijing, China, in 1921, which was reconfirmed by a find near Xian, China, in the 1990s, dating to about 600,000 B.C.E. The major technological advance by *Homo erectus* over time was the fashioning of handheld axes that had a cutting edge rather than the earlier axes with a blunt edge, which were likely used for chopping, scraping, and digging.

Between approximately 70,000 and 20,000 B.C.E., Asia's *Homo erectus* inhabitants evolved into modern *Homo sapiens*. Most of what is known about Asia's early *Homo sapiens* comes from the study of remains discovered in China and Australia. The earliest preaboriginal populations of *Homo sapiens,* described as "robust heavy boned humans" are found in northwestern Australia and date to 50,000–40,000 B.C.E. By 40,000 B.C.E., there were settlements of early *Homo sapiens* hunters and gatherers in the Lake Mungo region of southeastern Australia. In 1968, an American archeologist, Jim Bowler, discovered evidence of a ritual cremation at Lake Mungo dating to about 23,000 B.C.E. Between 30,000 and 20,000 B.C.E., "Gracile" populations, the ancestors of Australian aborigines, inhabited a series of sites widely spread across southern and eastern Australia.

EARLY AGRICULTURE IN SOUTHEAST ASIA

The earliest evidence of fixed permanent settlements in Asia comes from the uplands of the Mekong and Red rivers in northern Vietnam and Thailand. Dating roughly from 8000 to 2000 B.C.E., the best-known sites are clustered around Ban Chiang in northeastern Thailand's Udon Thani Province plateau. First discovered in 1957, the sites feature remains of the earliest rice cultivation in Asia, although archeologists debate whether the rice was a wild or domesticated variety. Clay pots at the site contain food remains, and the bones of chickens and pigs reveal elements of the local diet. The site also yielded bronze tools and weapons, as well as clay and wooden "rollers" used to mark patterns on local bark cloth. Ritualized burials at the site include bronze tools, weapons, and pottery. One site contains a large cemetery, suggesting some degree of permanent settlement.

Archeologists speculate that the Thai sites represent the earliest evolution of Asian agriculture among a society that was displacing earlier hunters and gatherers. Remains at the sites indicate that dependence on root crops such as taro and yams, which grew easily in the tropical floodplains, was giving way to cultivation of millet rice (or dry rice), which grew wild in the uplands. Early upland populations adopted a mixture of hunting-and-gathering and slash-and-burn cultivation, still practiced among highland populations in Southeast Asia and southern China. Slash-and-burn, or swidden, cultivation involves the clearing of fields by cutting wild vegetation and burning off the residue.

Between 1000–600 B.C.E., regional archeological sites demonstrate that some swidden cultivators migrated from the highlands into Vietnam's Red River floodplain. They abandoned swidden practices, instead adopting a so-called "hydraulic" agriculture based on irrigation. By controlling and managing the annual Red River floodwaters, farmers in the region developed the earliest wet-rice agriculture. This initial wet-rice civilization developed into what an archeologist, R. Heine Geldern, dubbed the "Dongson" culture (500 B.C.E.–C.E. 43), named for the original site of the discovery, in the 1920s, of the civilization's large cast bronze ritual drums.

EARLY AGRICULTURE IN CHINA

The earliest settled agricultural sites in China appeared about 4000 B.C.E., the date of the **artifacts** uncovered at Banpo, a large village site discovered

ARCHEOLOGICAL DISCOVERIES

1891 Dutch anatomist Eugene Dubois unearths remains of "Java Man," first *Homo erectus* specimen found in Asia, dating to ca. 900,000 B.C.E.

1920s Local Vietnamese villagers discover monumental Dongson culture bronze drums dating to ca. 500 B.C.E.

1921 Archeologists discover remains of "Beijing Man," later identified as a *Homo erectus* specimen dating to ca. 600,000 B.C.E.

1921 Excavation of first Yangshao culture site in Henan, China, dating to ca. 4000–2000 B.C.E.

1928 Chinese archeologist Wu Jinding excavates first Longshan culture site in Shandong Province, China

1949 Discovery of first artifacts associated with early Japanese Jomon culture near Iwajiku, Japan

1954 Discovery of Banpo, most famous Yangshao culture site, near Xian, China

1957 Evidence of early human settlement in Southeast Asia first uncovered near Ban Chiang, Thailand

1968 American archeologist Jim Bowler discovers evidence of ritual cremation at Lake Mungo, Australia, dated ca. 23,000 B.C.E.

1975 Earliest excavation of Taosi, largest Longshan culture site in China

1976 Discovery of extensive grave goods in tomb of Chinese emperor Wu Ding's wife provides key insights into aristocratic life during Shang dynasty

1995 Chinese archeologists discover remains of Yangshao settlement surrounded by pounded earth walls dating to ca. 3000 B.C.E.

in 1954 near modern-day Xian in northern China. The culture to which the artifacts (dating from 4000 to 2900 B.C.E.) at the Banpo and other Yellow River basin archeological sites belonged has been named Yangshao, after the village in the Henan Province where the red painted pottery common to these sites first came to the attention of Western archeologists in 1921. Yangshao sites provide the earliest dated evidence of the transition from hunting and gathering to settled agriculture in China.

The Yangshao sites indicate that farmers in this region of northern China moved directly from hunting and gathering to settled intensive agriculture without ever adopting swidden as an intermediate step. Remains at Banpo show that the local population independently domesticated wild forms of wheat, barley, and millet, which was the most prominent crop. The prominence of pottery at the Yangshao sites suggests its use in storing the surpluses of crops that are associated with the development of early agriculture.

The consequences of this commitment to settled agriculture are demonstrated at a Yangshao site at Xishan in Henan Province, discovered by Chinese archeologists in 1995, which is surrounded by a defensive wall of pounded earth. Although this is typical of village sites from roughly 3000 B.C.E. in the adjacent upper Chang River basin to the south, Xishan is the only Yangshao site so guarded.

The earliest permanent settlements in the upper Chang River basin of western and southwestern central China date to as early as 4500 B.C.E. They are distinguished from the Yangshao villages to their north by the cultivation of swamp rice rather than millet, and by their kiln-fired, highly polished black pottery. This ware was named Longshan after the first excavated site of this culture (ca. 3000–2000 B.C.E.), which was unearthed by a Chinese archeologist, Wu Jinding, in 1928. Early Longshan archeological remains are associated with a region that was warmer and wetter than that of their neighbors in northern China, and had a longer growing season.

This image shows some of the more than 8,000 life-size terra-cotta soldiers found in the tomb of the Chinese emperor Shihuangdi (r. 221–210 B.C.E.). In addition to foot soldiers, the tomb includes figures of archers, warriors on horseback, and charioteers. (Digital Vision/Getty Images)

TURNING POINT

Terra-cotta Soldiers

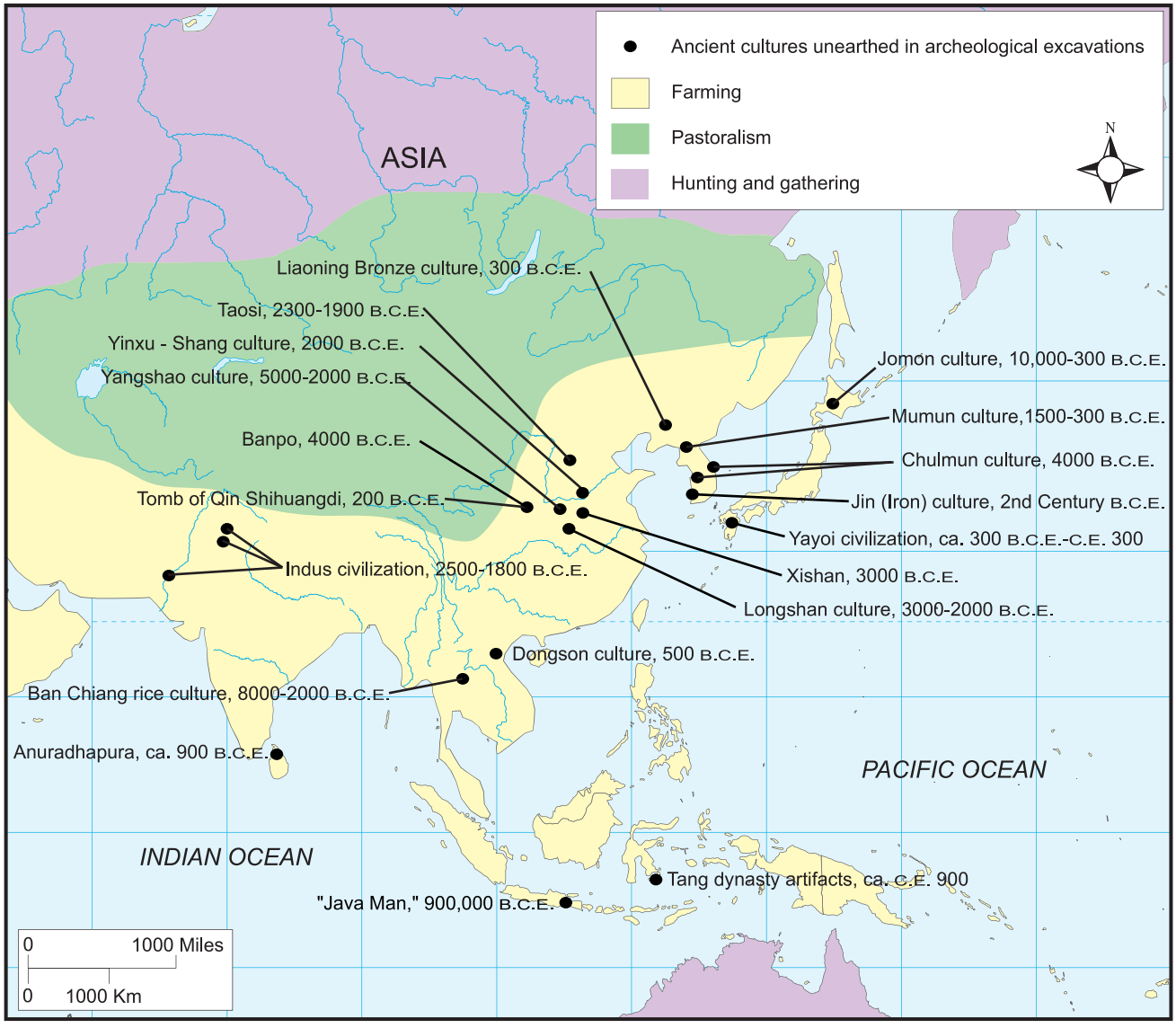
In 1974, farmers digging a well near modern-day Xian in northern China discovered an "army" of more than 8,000 life-size sculpted and painted clay warriors. The figures stand in underground pits next to the tomb of the first Qin emperor Shihuangdi (r. 221–210 B.C.E.). The imperial tomb and its terra-cotta army celebrate the Qin emperor's unification of China in 221 B.C.E. but also proclaim his ability to maintain that empire in the afterlife.

In the first of the four pits, 6,000 warriors stand in rows four deep in squads of 70; in the second pit are 89 wooden chariots, 500 chariot and cavalry horses, and 1,000 infantry in a u-shaped battle formation. The third pit contains the command headquarters staffed by military officers. The fourth pit is empty, apparently because the emperor died before it could be filled with other figurines.

The pits provide a valuable picture of the Qin army's forces, use of weapons, and military tactics. In the second pit, 1,000 troopers are protected by 334 archers armed with crossbows, lined in eight clusters; 160, who are wearing heavy armor, are kneeling in a front line and others stand at the rear. The second pit contains 64 chariots, in eight clusters. Each chariot is commanded by an archer, and is guarded by a soldier on each side and another at its rear. In the center of this pit there are 19 war chariots and 100 warriors. In the rear are three clusters of six chariots, 124 vaulting horses, and warriors armed with bows. Each chariot carries two people—a charioteer and his scout. Each section can engage the enemy on its own or attack or defend as a whole.

MAJOR ARCHEOLOGICAL SITES OF ASIA AND THE PACIFIC

Treasured artifacts, such as pottery and tools, which have been unearthed and recovered in China, Japan, Korea, along the Indus Valley, and throughout Southeast Asia, provide a glimpse of how ancient Asian societies lived and thrived.



Thick walls made of successive layers of stamped earth commonly surround Longshan archeological sites. Chinese written accounts of this era, dating to the sixth century B.C.E., reported that these walled cities provided protection against the hunters and gatherers who lived in the highland frontiers to the south and west of the Longshan sites. These **seminomadic** populations, who had not made a similar commitment to settled agriculture, periodically raided the prosperous agricultural communities, especially in times of famine.

Taosi, in China's Shaanxi Province, which dates to about 2300 to 1900 B.C.E., is the largest Longshan archeological site, at almost 100,000 square feet (9,300 sq m). **Excavated** by Chinese archeologists from 1975 to the present day, Taosi yielded similar artifacts to those at other Longshan sites, but also contained the first known Chinese ritual solar observatory, a common feature in China's later imperial courts. The observatory opens to the east, allowing observation of the sunrise during **solstices** and **equinoxes**. Taosi residents likely enlisted these observations in their attempts to

LINK IN TIME

The Great Wall

The Great Wall of China is a massive defensive structure measuring roughly 4,000 miles (6,400 kilometers) long, cutting across northern China from Inner Mongolia in the east to the Yellow River and Gobi Desert in the west. It began as a series of disconnected sections built by competing factions during the Era of Warring States (403–222 B.C.E.) to protect ancient China from its seminomadic neighbors to the north and west. Emperor Qin Shihuangdi (221–210 B.C.E.) was responsible for connecting the previously constructed sections into a continuous defensive wall.

In contrast to the Great Wall visible today, which was improved by later dynasties, the Qin wall consisted of a mound of loose stone and wooden frames covered by packed earth. The eastern section was built on a wall constructed originally during the Zhao dynasty (ca. 1045–221 B.C.E.) and later rebuilt by the Yan regional state (475–222 B.C.E.), which contributed during both the Zhao dynasty and the Era of Warring States. The middle section represented mostly new construction, and included strategically placed beacon towers from which fires were lit to signal other sections of the wall in case of impending attacks. The third (western) section included new segments linking several walls built by earlier states as protection against their Chinese neighbors.

The Great Wall is perhaps history's greatest public works project. Chinese dynastic histories report that 300,000 soldiers, as well as 500,000 conscripted slaves, convicts, and local laborers, worked 10 years to complete the Qin wall. Later Chinese scholars cited the wall's expense, and the estimated thousands of deaths that occurred during its construction, as examples of Qin tyranny.

develop a solar calendar, which is crucial to determining appropriate planting and harvesting cycles.

The archeological remains of the northern Chinese city of Yin, located just outside modern-day Anyang in the upper Yellow River basin, represent the evolution of these earlier sites into impressive imperial cities. At its peak between 1400 and 1050 B.C.E., Yin served as the capital city of the Shang **dynasty** (1766–1122/1027 B.C.E.) and covered roughly 10 square miles (26 sq km). The complex consisted of a palace, royal ancestral shrines, and 80 accompanying residences. The site also contains several dozen royal tombs, including that of the wife of the emperor Wu Ding (r. 1200–1181 B.C.E.), discovered in 1976. In the tomb were the remains of 16 servants and six pet dogs (buried as sacrifices to serve her in the afterlife); 468 bronze ritual objects; many inscribed oracle bones and elaborate jade, stone, and bone carvings; bronze weapons, including a wooden-handled bronze-bladed dagger, the preferred battle weapon of the period; and 6,900 cowrie shells, which served as money.

These remains reveal much about **aristocratic** court life of the **era**, which formed the model for imperial courts of later Chinese dynasties. The elites of the Shang dynasty court were surrounded by luxury and aided by numerous servants, who were bound in their service to the elite, even in death. The era's religious practices included the reading of oracle bones to predict the future and the performance of elaborate rituals that required finely crafted ritual paraphernalia. People believed in an existence after death, in which the dead lived much as they had in their earthly existence, with aristocrats needing servants, pets, ritual items, and even money to maintain their lifestyles.

The imperial grandeur that is displayed in the remains of the Shang court reached new heights under the Qin dynasty (221–206 B.C.E.) and its elaborate capital at Xianyang near modern Xian. The most famous project of the first Qin emperor, Shihuangdi (r. 221–210 B.C.E.), was the Great Wall, erected across China's northern border to protect his realm from attacks by seminomadic warrior

tribes from the surrounding grasslands of central Asia and Mongolia. Continuing the Shang and Qin initiatives, successor dynasties would also build, refurbish, or expand imperial capitals, restore and extend the Great Wall, and commission elaborate tombs to house deceased rulers and elite.

EARLY SITES IN KOREA AND JAPAN

Korea's earliest archeological sites, discovered at Yang'yang-gun and Osan-ni in the province of Kangwon, date from 8000 to 5000 B.C.E. They contain flat-bottomed pottery decorated with **relief** designs. Between 5000 and 1000 B.C.E., Jeulmun earthenware appears in western and southern coastal regions of Korea. These wide-mouthed storage and cooking vessels, named after the Korea site of their original discovery, are decorated with patterns of diagonal lines made with a comblike instrument. They are associated with the spread of evolving settled agriculture societies during this era.

Remains from Korea's Mumun pottery period (1500–300 B.C.E.) show that, by this time, Koreans had become millet farmers. The era is also well known for its large settlements and megalith, or large stone, burial sites found in the Liao River basin of North Korea. The elite were buried in tombs using upright stones supporting a horizontal slab. Another form of burial for elites and commoners used stone cists (underground burial chambers lined with stone) and earthenware jar coffins. Bronze ritual objects, pottery, and jade ornaments similar to those found in the early Chinese imperial tombs have been recovered from these first Korean tombs, reflecting that Koreans at this time shared similar beliefs about an afterlife with their Chinese neighbors.

Japan's earliest development mirrors that of Korea in the dates of its evolution from a hunting-and-gathering culture to a settled agricultural economy. Its first artifacts are associated with the Jomon culture (10,000–300 B.C.E.), named for its widespread and distinctive *jomon,* or "cord-marked," clay pots and figures, decorated using sticks wrapped in cord. Shell-covered trash mounds of Jomon sites include animal bones, tools, weapons, pottery, and jewelry, which are appropriate to that era's hunting, gathering, and fishing society. The first such site to be discovered by **archeologists** was excavated near Iwajiku in 1949.

The Yayoi civilization in southern Japan (ca. 300 B.C.E.–C.E. 300) introduced wet-rice cultivation, and, like those of their Korean neighbors, the archeological sites associated with this early settled wet-rice society contain bronze ritual artifacts and iron tools and weapons. Yayoi archeological sites are concentrated in the coastal regions of Japan's three southern islands that share the Inland Sea. Those in Yayoi society, inspired by their contemporary Korean neighbors, built large earthen mounds, some surrounded by water moats, over the tombs of their elite. These tombs include clay figurines depicting mounted male warriors that are the subject of much debate among archeologists. Some believe this statuary represents the era's ruling elite as Japanese mounted warriors, while others assert that it represents victorious invaders from Jin Korea, who introduced their culture to Japan.

See also: Agriculture; Angkor Wat; China; Culture and Traditions; India; Indian Ocean Trade; Japan; Java; Korea; Micronesia; Society.

FURTHER READING

Higham, Charles. *Archeology of Mainland Southeast Asia*. Cambridge: Cambridge University Press, 1989.

Imamura, Keiji. *Prehistoric Japan: New Perspective on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

Kim, H.J. *Pre-History of Korea*. Honolulu: University of Hawaii Press, 1978.

Yang, Xiaoneng. *New Perspectives on China's Past*. New Haven, CT: Yale University Press, 2004.

Art and Architecture

South Asia's Hindu and Buddhist traditions established artistic standards and principles that formed the foundation for much of ancient Asia's art and architecture. These principles were most fully expressed in Chinese imperial art and architecture, which were influenced by Indian Buddhist traditions and in turn inspired China's Korean, Japanese, and Vietnamese neighbors.

CHINESE ARTISTIC TRADITIONS

The ideas of the Chinese philosopher Confucius (Kungfutzu, 551–479 B.C.E.) shaped China's early architecture. Confucianism emphasized the importance of social order and **hierarchy**. As a result, China's imperial courts and their accompanying ritual and urban complexes celebrated the role of the Chinese emperor as the source of an orderly and productive Chinese society. China's architecture also celebrated orderly use of space, consistent with what became known as *feng shui,* the practice of placement and arrangement of space to achieve harmony with the natural surroundings.

Feng shui was reflected in the placement of public buildings. Rather than a random development, the city was laid out in a grid pattern on a north-south axis. North was positive, sacred, and traditionally associated with the realm of the supportive ancestors and **celestial** divine. South was negative, potentially dangerous, and associated with malevolent spirits and threatening outsiders. East and west were the middle ground where the sacred and the **secular** intersected. Burial grounds, as in the case of the royal tombs, were placed outside of this orderly urban ritual, administrative, and residential realm, because they contained the unpredictable spirits of the dead.

Urban Architecture

Cities of the Tang **era** (C.E. 618–907) built on the earlier Chinese court art traditions that date to the Shang **dynasty** (1766–1122/1027 B.C.E.). They made a conspicuous public statement about orderly Chinese society and became the architectural models for Chinese capital cities at Kaifeng (then called Pien-ching) in northern China (C.E. 960–1127), Hangzhou in southern China (C.E. 1127–1279), and Beijing (C.E. 1271–1644). They also inspired Kyongju, the capital city of Unified Silla Korea (C.E. 668–918) and the Nara and Kyoto capital cities of imperial Japan (C.E. 710–1185).

Tang cities, which were protected by defensive walls and gates, also were based on the cardinal points of the compass. The Tang imperial city of Changan (modern-day Xian) had major east-west and north-south thoroughfares that defined the subdivisions of the city. The imperial palace compound was in the north; beyond the palace and outside the northern city walls was an imperial park that included a large artificial lake, which served as a royal hunting preserve and private space for the emperor and his court.

At the extreme north of the city was the emperor's private residential compound, in a garden-like setting, complete with carefully placed groupings of plants and rocks and winding streams and pathways. These natural elements satisfied the emperor's need for a sense of a universal order beyond the secular orderliness of his surrounding imperial compound. Symbolically, the emperor alone, in his residential compound, was able to bridge the two realms.

IMPERIAL TOMBS

Chinese imperial tombs commemorated the secular accomplishments of an emperor and insured that the emperor became a benevolent ancestor. The early underground tombs, which date to the Shang era (1766–1122/1027 B.C.E.), were constructed in the form of a Chinese house. The "home" of the

deceased replicated the imperial household, with inner and outer chambers flanked by side corridors and rooms containing grave offerings. Intricate bronze vessels, weapons, carved jades, and ceramic objects were placed near the coffin to provide comfort and protection in the next world. The walls of the burial chambers were often decorated with carved or painted scenes that depicted popular legends or daily life.

The underground tomb of the Qin dynasty **monarch** Shihuangdi (r. 221–210 B.C.E.) near modern Xian in northern China features a huge underground chamber containing an army of life-sized clay figures to "guard" and "serve" the emperor in the afterlife. The Han era (206 B.C.E.–C.E. 220) is especially known for its tomb paintings, which display the first elements of Chinese landscape painting, in contrast to the portrait art that dominated the Han palaces.

Tang-era (C.E. 618–907) royal tombs featured large commemorative archways leading into "urban" areas, complete with broad avenues ("spirit ways") containing larger-than-life human and animal statuary, ritual halls, and elaborate gardens. These avenues led to the burial mound, which was located above the tomb entrance. A vertical shaft connected the mound to an underground burial chamber. In front of each Tang tomb stands a focal memorial stone marker (stela) that proclaims the worldly accomplishments of the deceased. Tang tombs are also known for their *sancai,* three-colored glazed pottery figures of horses and human figures that were intended to accompany the deceased in their death.

Landscape Painting

Traditional Chinese landscape painting, which had its roots in the wall murals of the Han era, developed its "classical" style in the reign of the Tang dynasty. It was heavily influenced by Buddhist and Daoist traditions that minimized the importance of humanity and asserted the prevailing power of nature. For example, although a painting may depict the emperor's court activities, it is done in a setting in which all the participants, rulers as well as commoners, are considered. The surrounding landscape in such a work typically includes the rural communities surrounding the court, its urban centers, and the representative landscapes of a region. Traditional Chinese scroll paintings show little concern for perspective, the creation of a realistic scale, or conveying a sense of hierarchy. All elements, human and natural, are treated with the same care by the artist; none is emphasized as being more important than another.

ARTISTIC TRADITIONS OF INDIA

Architecture and art in India reflected the ideals of early Vedic religious traditions, which promoted the moral superiority and spiritual leadership of the priest over the secular authority of a monarch. This emphasis on the sacred was consistent with the central notions of India's **indigenous** Hindu and Buddhist religious traditions, which taught that humanity was impermanent. In southern Asia, temples took precedence over the construction of elaborate palace complexes and royal tombs.

Buddhist Art and Architecture

India's early architectural and artistic traditions developed following the founding of the Buddhist religion in the fifth century B.C.E. The best-known Mauryan-era (ca. 400–180 B.C.E.) Buddhist structures include inscribed stone pillars roughly 60 feet (18.3 m) tall, strategically erected throughout north India to establish the legitimacy of the Mauryan king Asoka (ca. 273–232 B.C.E.) and his patronage of the Buddhist religion. Typical of Indian artistic tradition, the **inscriptions** diminish Asoka's secular accomplishments in favor of highlighting his patronage of Buddhism. The inscriptions begin by acknowledging Asoka's glorious military victories and his inspired secular leadership, but then proclaim that Asoka ascribed no great significance to these accomplishments. Instead, the inscriptions praise Asoka for regarding an orderly secular world as his greatest achievement, as the necessary precondition for his subjects to achieve spiritual salvation. Thus Asoka, like other Mauryan kings, supported a mixture of secular art and sacred art and architecture.

TURNING POINT

Todaiji Temple

The Todaiji Buddhist temple in the central Japanese city of Nara was built in C.E 743, when Buddhism was the Japanese state religion and Nara was the residential capital of the Japanese emperor and his court. The temple building and its statue are modeled on the art and architecture of contemporary Tang China (C.E. 618–907). The temple was built to symbolically unify the Japanese elite and all the Buddhist temples that were spread throughout Japan under the centralized political and spiritual leadership of the Japanese emperor Shomu (r. C.E. 724–749). Japanese legend records that 2,600,000 people participated in its construction.

The Todaiji temple contains the massive Daibutsu ("Great Buddha") statue, which stands 49 feet (15 m) in height and is the world's largest cast bronze Buddha. The giant Buddha statue is housed in a wooden building, which at 157 feet (48 m) high is the world's tallest wooden building. The statue's ears are 8.25 feet (2.5 m) long; its hands can hold 20 people. It weighs 500 tons (455 m tons). Great thick wooden pillars hold up the structure. One of these in the rear of the temple has a hole through it, said to be the size of the Buddha's nostril. By tradition, if a person can pass through this hole, he or she is said to be a candidate for heaven.

Since the temple was built, the Daibatsu has been repaired several times after damage caused by earthquakes; its head has fallen off at least once. While the base of the statue dates to the eighth century, the upper portion, including the head, was recast in the late twelfth century. The Todaiji temple that remains today was rebuilt in 1709, after the existing wooden building burned in a late sixteenth-century fire. Following that fire the Buddha statue had remained uncovered for more than a century.

The Buddha is seated in a meditation posture appropriate to the Daibutsu Buddha, who in Buddhist tradition is the source of truth and knowledge. The "Cosmic" Buddha sits on his lotus throne (symbolic of purity and the foundation for the "flowering" of knowledge), presiding over the various levels of the universe. The Buddha's outstretched hands symbolize his willingness to offer truth and knowledge to his faithful devotees.

The notable architectural remains of the Mauryan era include large hemispherical earthen mounds, or *stupas*. Dating as early as about 461 B.C.E., these mounds are associated with events in the life of Buddhism's founder, Siddhartha Gautama (563–483 B.C.E.), known as the Buddha or "Enlightened One." One of the most significant mounds is located at the Mahabodhi temple complex at Bodhgaya (near modern-day Varanasi in northern-central India), the site where the Buddha is said to have achieved enlightenment. According to tradition, Asoka founded the Mahabodhi temple complex. A large stupa at nearby Sarnath, where the Buddha preached his first sermon, predates Asoka but benefited from his patronage. It is also the site of one of his pillars, which was once topped by a lion capital. The central image on the flag of India is taken from one of the Sarnath columns. It represents Asoka's 24-spoke *chakra,* a traditional **Sanskrit** symbol that denoted Asoka's "wheel of energy."

Additional Influences

India's further architectural evolution resulted from the introduction of religious **iconography** in the second century B.C.E. At this time, statues representing Buddhist spiritual concepts became common and inspired Hindu artists to create their own divine statuary and temples. The new popularity of statuary was influenced by the Macedonian king Alexander III, the Great, who invaded northwest India in 327–326 B.C.E. After Alexander's death four years later, some of his generals established

their own domains in India's borderlands, and their Greek culture influenced regional art.

Indian statuary of this time represents an adaptation of the Greek tradition, which realistically portrayed gods and goddesses in contemporary human form and dress. This tradition is represented in the second- and third-century B.C.E. Gandharan and Kushana **icon** art produced on India's northwestern frontier. The most interesting remaining statuary from this period portrays the Buddha as ethnically Western and in traditional Greek dress.

India's new art and architecture also drew inspiration from new forms of religious devotion that developed in the second century B.C.E. The Bhakti devotional tradition in Hinduism and the Mahayana Buddhist tradition in Buddhism advocated the devotee's potential to embrace the divine through personal devotion and moral commitment, expressed by gifts, prayer, and ritual performance.

The earliest Indian temples were third century C.E. Buddhist and Hindu meditation sites **excavated** into the faces of mountains in northwest India, where the monastic compounds consisted of one or more chapels for worship. The oldest chapels contain representations of the Buddha in abstract, as a focal stupa crafted out of solid stone. Later depictions of the Buddha and the Hindu gods Visnu and Siva take the form of statuary, accompanied by images of Mahayana Buddhist and Hindu divinities. Buddhist and Hindu texts were also depicted in carved stone and in paintings on shrine walls. Five hundred years later, freestanding Buddhist shrines and Hindu temples across India adopted and adapted the art and architecture portrayed in these early mountain temples.

In northern India, a fluted melon-shaped cushion called an *amalaka* crowned most Hindu temples; in south India, rounded *stupi* topped the spires. These decorations reflected an adaptation of earlier temple art that culminated in a depiction of the *linga* (the male phallus), a symbol of the Hindu god Siva, the lord of fertility. Hindu temples usually included the image of such a divine being, with a spire above the image pointing to the god's celestial home, and a hall in front of the image for worshippers. Preliminary iconography, stone and cast-metal (normally bronze) icons, and wall murals inspired by the oral and textual traditions of the temple's focal divine prepared the worshipper to embrace the Lord in his inner sanctum.

EARLY INDIAN ARTISTIC LEGACY IN ASIA

India's art and architecture inspired **artisans** in Sri Lanka, where Buddhist art and architecture reached new heights. The great Buddhist stupa at Anuradhapura (built about 249 B.C.E.) is said to have been built initially after Buddhist monks sent by the Mauryan king Asoka converted Sri Lanka. In its final twelfth-century form, the stupa is taller than all of the ancient Egyptian pyramids except for the Great Pyramid at Giza.

From the third century C.E., artisans in the new **monarchies** of Southeast Asia also redefined and modified Indian temple art to fit their own cultural needs. Among the initial ritual complexes, the ninth-century C.E. Borobudur in central Java set the standard. The worshiper symbolically enters the Borobudur as a pilgrim, who physically and spiritually moves from the material secular world to the abstract realm of the divine. The pilgrim encounters elaborate stone **relief** depictions of the Indian Buddhist texts at the Borobudur's base, moves through intermediate terraces of Mahayana Buddhist statuary, and finally reaches a large culminating stupa at its top. Cambodia's twelfth-century C.E. Angkor Wat, dedicated to the Hindu god Visnu, and the Mahayana Buddhist Angkor Thom Bayon are the most impressive among the subsequent temple sites. These and other temples of that era in mainland Southeast Asia and Java still drew their inspiration from the Indian architectural tradition, but prominently incorporated local variations that were consistent with local cultural heritage.

Indian statuary and temple art also spread to China in the first century C.E., following the Silk Road from northwest India across central Asia. This pathway to China was marked by Buddhist pilgrimage and monastic sites, and accompanying statuary art and wall murals. Among these was Bamiyan, Afghanistan, which had two massive early sixth-century stone Buddhas, one standing 180 feet (55 m) and the second 121 feet (37 m). The fifth-century

Longmen Grotto complex in China's northwest Henan Province consists of more than 100,000 statuary images in a series of caves and temples. Here, the Indian Buddhist stupa had transitioned into *pagodas,* or multitiered towers, which would become the distinctive element in Buddhist temples throughout eastern Asia.

See also: Angkor Wat; Buddhism; China; Culture and Traditions; Hinduism; India; Japan; Java; Korea; Language and Writing; Society.

FURTHER READING

Craven, Roy C. *Indian Art.* London: Thames and Hudson, 1997.

Rawson, Philip S. *Art of Southeast Asia.* London: Thames and Hudson, 1990.

Stanley-Baker, Joan. *Japanese Art.* London: Thames and Hudson, 2000.

Watson, William. *The Arts of China to AD 900.* New Haven, CT: Yale University Press, 1995.

Watson, William. *The Arts of China 900–1620.* New Haven, CT: Yale University Press, 2000.

Australia

Island continent located in the southwestern Pacific Ocean, first settled by humans between 50,000 and 40,000 B.C.E. Two major geographical and climatic changes significantly shaped prehistoric Australia. The first was the continent's physical separation from Asia about 10,000 B.C.E. The second took place between 3000 and 1000 B.C.E., with the drying of swamplands, vast lakes, and forested zones that once covered substantial areas of Australia's interior. This left Australia covered largely by semiarid grasslands and a marginally productive, dry interior known as the Outback. Aboriginal adjustments to this changed habitat became the basis of early Australian culture.

EARLY POPULATIONS

The earliest aboriginal Australians likely migrated from Southeast Asia across a land bridge that once joined Australia and the Asian continent before the most recent **ice age**, which ended about 10,000 B.C.E. The earliest archeological remains of human settlement in Australia date from 50,000 B.C.E. in northwestern Australia (the Kimberley Range); from 40,000 B.C.E. in the Lake Mungo area of southwestern Australia; and from 30,000 to 20,000 B.C.E. in several regions of northern and southern Australia (Kenniff Cave, Koonalda Cave, Puritjaira, and Cave Bay), inhabited by an early aboriginal civilization collectively called "Gracile."

These earliest aborigines were joined after 10,000 B.C.E. by Torres Strait fishing populations, many of whom made the relatively short voyage to Australia across the Timor Sea from New Guinea. Anthropologists generally consider aboriginal Australians and the Torres Strait Islanders as two distinct groups, with different linguistic traditions. The Torres Strait Islanders are ethnically related to Papuan people of Melanesian heritage in New Guinea, whereas genetic evidence suggests ethnic ties between Aboriginal Australians and other aboriginal populations distributed across Asia. Despite these distinctions, long-term contact between the two Australian groups, as well as isolation from outside cultural influences, led them to develop broad cultural similarities.

Economic Practices

Prior to contact with Europeans in the eighteenth century C.E., most **indigenous** Australians were **seminomadic**, following seasonal sources of food over a fairly defined territory; none practiced settled agriculture. Indigenous Australians hunted animals of all sizes, from relatively large game, such as kangaroos and emus, to smaller prey, such as snakes, birds, turtles, and even insects. Despite

Some aboriginal rock paintings found in Australia, such as the one shown here in Kakadu National Park in the Northern Territory, date back as early as 50,000–40,000 B.C.E. The paintings often represent significant figures or events in the mythical aboriginal past, called the "Dreaming" or "Dreamtime." (Ira Block/National Geographic/Getty Images)

the popular image of the boomerang as the weapon of choice, indigenous Australians relied mainly on the spear for hunting. Indigenous hunters developed the *woomera,* or spear-thrower, to launch spears with greater force. Ancient Australians who lived in coastal areas and along rivers became expert fisherman; one community near the present-day city of Victoria even practiced eel farming.

A period of rapid social and cultural change appears to have occurred in Australia between 3000 and 1000 B.C.E., about the same time as severe environmental changes. This period was marked by greater human intervention in the environment, accelerated population growth, increased trade between indigenous groups, and the development of more sophisticated stone tools. During this time, Australians also domesticated the dingo, a wild dog used to assist in tracking and hunting game.

Cultural, Religious, and Artistic Practices

Indigenous Australian societies featured complex kinship relations, and marriages were especially subject to strict rules. In central Australia, for example, men were required to marry women who were their distant cousins. Men and women who were eligible for marriage would gather annually at a festival (*corroborees*) at which goods were traded, news exchanged, and marriages arranged. These practices were designed to ensure that individuals married outside of their own family group,

LINK TO PLACE

Fossils: Australia and the Americas

Australia's oldest and most famous fossil remains, dating to 110 million years ago, are the jawbones of two mammals that were monotremes, or egg-laying mammals related to the platypus. Fossil evidence indicates that in North America at about the same time, 95 million years ago, marsupials, mammals with pouches that were early relatives of the American possum, were dominant. The first fossil evidence of marsupials in Australia dates only to 55 million years ago, leading scholars to conclude that the kangaroo was not native to Australia. Instead, it likely evolved from early marsupials that migrated to Australia at a time when it was joined to the continents of North and South America. Other fossil remains that have been found on all three continents, for example the remains of an early hoofed mammal known as the condylarth, support this conclusion.

Scholars assume that at some point in time Australia, South America, and Antarctica broke away from North America to form the ancient continent called Gondwanaland, a process that was completed between 550 and 500 million years ago. At that time, Australia and South America had similar animal populations. Roughly 40 million years ago, South America, Australia, and Antarctica separated into individual continents. In South and North America, placental, or live-bearing, mammals became dominant over the other mammalian species, while in Australia marsupials such as kangaroos, koalas, Tasmanian devils, and wombats won out, perhaps because of significant geological and environmental changes to which the marsupials were better able to adapt. These changes included a shifting climate and falling temperatures in Antarctica and the lower regions of South America, and a decrease in the number and types of predators in South America and Australia.

thus increasing the genetic health and diversity of the population.

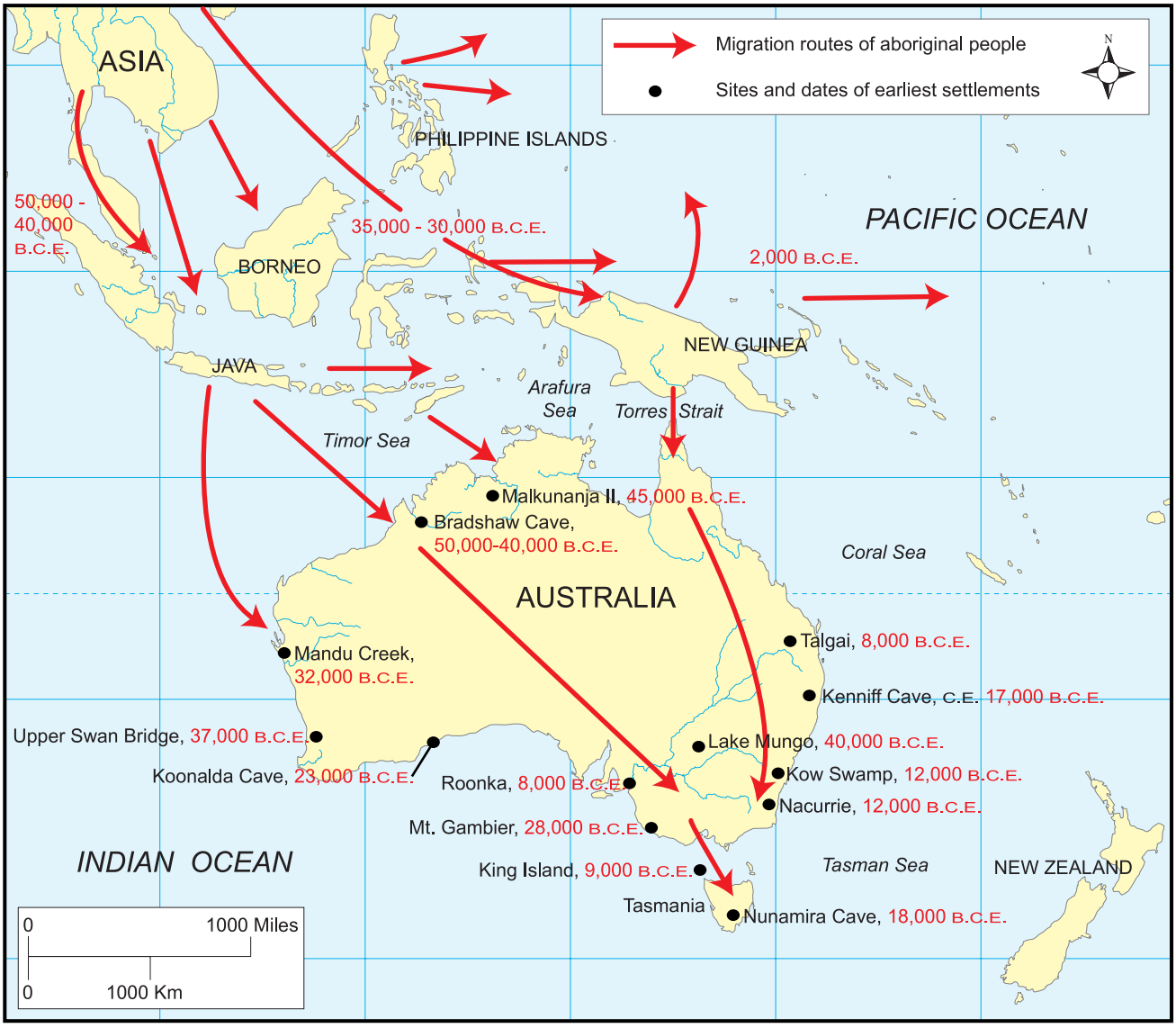
Indigenous Australian society did not feature individual ownership of land, but did recognize group use rights, in which one group recognized the right of another to territory that was marked by natural geographic boundaries, such as rivers, lakes, and mountains. Elders passed this knowledge of the group's boundaries down to the next generation through song, dance, art, and storytelling.

Storytelling and art were also used to preserve indigenous traditions of the people regarding the origins, history, and relationship to the natural world. Indigenous Australians call the beginning, or creation, of their world the "Dreaming" or "Dreamtime." At this time, they believe, "ancestors" rose from below the earth to form various parts of nature, including animals, natural formations, and the sky. Humans and nature are thus one and the same; rock formations and rivers are ancestor spirits that remain spiritually alive. For example, the Nyungar people of western Australia believe that a high ridge known as the Darling Scarp represents the body of a snakelike creature, called a *wagyl,* that created the rivers and land formations in the region during the Dreamtime. It is said that the wagyl's tracks formed the sand dunes and its body the river beds, and where it stopped to rest it left bays and lakes. As it periodically moved from under to above the earth's surface it formed the rocks into hills, and its scales fell off to create forests and wooded areas.

Rock carvings and paintings discovered in the Bradshaw Cave in the Australian Northern Territory depict a wide variety of subjects. The earliest images, which date to as early as 50,000 to 40,000 B.C.E., include images of hunters or warriors; animals such as wallabies, turtles, and fish; and even the skeletons of animals and humans. Later images, made after European contact, show pigtailed European visitors, sailing ships, and individuals carrying firearms. These images at first carried religious significance, and also represented important

MIGRATORY ROUTES OF ABORIGINAL PEOPLES TO AUSTRALIA AND PACIFIC MIGRATIONS

The earliest aboriginal peoples likely migrated from the Eurasian continent across a land bridge into the Australian mainland and Tasmania between 50,000 and 40,000 B.C.E. The Europeans first discovered Australia in the 1600s but did not establish settlements there until the late 1700s, and the first British settlement was established in 1788.



events in the lives and history of these people. They told stories about Dreamland, marked territorial land use rights, and served as reference points for those traveling across the Australian landscape.

EUROPEAN ARRIVAL AND IMPACT

Although Dutch navigators charted the coasts of Australia during the seventeenth century C.E., the first significant contact between Europeans and Australians occurred after Captain James Cook's claim of Australia for England in 1770, followed by the first British settlement of Australia, at Botany Bay, in 1788. Archeologists estimate that the indigenous Australian population in the late eighteenth century was between 300,000 and 1 million people. Over time, the Europeans absorbed the indigenous people into their newly created Western European–style communities, killed them, or drove the local populations from the more productive coastal areas. As Europeans began to explore and settle the inland grasslands, the indigenous peoples were

RISE OF AUSTRALIA

CA. 55,000 B.C.E. Earliest evidence of marsupials in Australia

CA. 50,000–40,000 B.C.E. First evidence of settlement by humans

CA. 40,000 B.C.E. Evidence of earliest settlement of southern Australia

CA. 30,000–20,000 B.C.E. First evidence of "Gracile" populations, ancestors of the Australian Aborigines

CA. 23,000 B.C.E. Earliest evidence of a human cremation in Lake Mungo region

CA. 10,000 B.C.E. Migration of Torres Strait fishing population to Australia

CA. 3000–1000 B.C.E. Prehistoric Lake Mungo dries up; the natural environment begins to stabilize; domestication of the dingo

C.E. 1606 First Dutch contact with Australia; continuing periodic coastal trade between Australian aborigines and the Dutch East India Company

C.E. 1770 Captain James Cook claims Australia for England

C.E. 1788 First English settlement at Botany Bay

pushed out of those productive lands as well. The remaining indigenous peoples were forced onto marginal lands considered by Europeans to be uninhabitable, such as the Great Sandy Desert, located in the northwestern Australian state of Western Australia.

See also: Aboriginal Peoples; Myths and Epics.

FURTHER READING

Mulvaney, John, and Johan Kamminga. *Prehistory of Australia*. Washington, DC: Smithsonian Institution Press, 1999.

Nile, Richard. *Australian Aborigines*. New York: Steck-Vaughn, 1993.

Smith, W. Ramsay. *Myths and Legends of the Australian Aborigines*. Mineola, NY: Dover, 2003.

Buddhism

Religion, widespread throughout Asia by the fourteenth century C.E., based on the teachings of a sixth-century B.C.E. Indian prince, Siddhartha Gautama, who renounced a life of comfort and power to seek truth. Ultimately, he claimed to achieve nirvana (**Sanskrit** for enlightenment), an understanding of the universal order and of humankind's relationship to it, and was thereafter called the Buddha, or the "Enlightened One."

Forsaking his own immediate salvation (a spiritual escape from the realm of human existence to a realm beyond), the Buddha taught 45 years until his death, or *parinirvana* (complete enlightenment). Following his death in ca. 483 B.C.E., his disciples formed a Buddhist monastic order, or *sangha*, which spread the faith throughout India.

INITIAL SPREAD

Buddhist monks spread the Buddha's "Middle Way," which preached the moral reform of existing

Buddhism originated in northern India during the fifth century B.C.E. and eventually spread throughout southern and southeastern Asia, China, Japan, and into what is now Indonesia. Chiang Rai, Thailand, is home to the contemporary statue of the Buddha shown here. (Dennie Cody/Taxi/Getty Images)

society and humanity's imperfect religious practices. Monks sent by the Mauryan ruler Asoka (r. ca. 273–232 B.C.E.) had converted Sri Lanka's elite by 249 B.C.E., the initial date of the Great Buddha temple at the Sri Lankan capital of Anuradhapura.

With the opening of the overland Silk Road trade route between India and China (138–126 B.C.E.), many sojourning traders and residents along the central Asian caravan route converted to Buddhism. The early caravan towns, such as Sogdiana (modern-day Bukhara in Uzbekistan) supported Buddhist temples and pilgrimage centers, where an international community of monks traveling the route periodically studied.

Buddhism gained a foothold in Han-era northern China (206 B.C.E.–C.E. 220), and, in a time of turmoil, gained numbers of converts after the Han **dynasty** fell in the early third century C.E. At that

time the Chinese city of Luoyang, located at the end of the Silk Road, became a noted center of Buddhist learning. There, scriptures transported overland from India were translated into Chinese. At roughly this same time, local Kushana rulers at the western end of the Silk Road constructed a 180-foot-tall (55-meter-tall) Buddha statue at Bamiyan in what is now central Afghanistan.

Buddhist pilgrims traveling the **maritime** trade route between India and China in the third century introduced Buddhism to Southeast Asia, where several rulers converted to the faith. Leaders of early states in Sumatra and Java supported pilgrimage centers for Buddhist monks traveling between major Buddhist monastic centers in China and southern Asia. By the fifth century C.E., Nalanda, near modern-day Patna in northern India, had become the foremost international center of Buddhist scholarship. It would remain so until the twelfth century, at which time the decline of Buddhism in India forced a relocation of the center of the Theravada Buddhist church (a conservative, traditional style of Buddhism that teaches meditation for creating good karma) to Sri Lanka. Similarly, Mahayana Buddhist scholarship (a more liberal, innovative style of Buddhism that teaches that people are already enlightened beings but do not realize it) moved from India to China, which was the home of several pan-Asian Buddhist sects. Among these China-based Buddhist schools was the Chan Buddhist meditation sect, which was founded in China between C.E. 420 and 479, and then became the favored Buddhist sect, known as Zen Buddhism, among Japan's *samurai,* warrior, elite from the late twelfth century.

DOCTRINE

Buddhism offers spiritual refuge from the imperfection and subsequent chaos of everyday existence in the Three Jewels: the Buddha, his teachings, and the sangha. Buddhists consider these to be alternate paths to the elimination of human suffering. The Buddhist devotee might seek the mercy and intervention of the Buddha himself, immerse him- or herself in the study of and mediation on his teachings, or commit to the counsel of the learned Buddhist monkhood.

The Buddha's teachings and early Buddhist practices were compiled in a series of texts. The most important of these is called the Three Collections (*Pitakas*), which contain the Buddha's teaching (*sutra*), the laws of the sangha (*vinaya*), and Buddhist philosophies (*abhi-dharma*). The three collections, together with the later "three practical educations"—ethics (*sila*), meditation (*samadhi*), and scientific wisdom (*prajna*)—comprise the basic doctrines of Buddhism.

A Buddhist must accept the Four Noble Truths: (1) the world is filled with suffering; (2) suffering is caused by greed (craving or attachment); (3) to eliminate greed is to eliminate suffering; and (4) greed and consequent suffering is avoided by following a path of moral behavior and thought, known as the Eightfold Way. The Eightfold Way includes the elements of Right (meaning "spiritually pure") View, Right Intent, Right Speech, Right Action, Right Livelihood, Right Effort, Right Mindfulness, and Right Concentration.

Buddhism prescribes a lifestyle accompanied by meditation. Although Buddhist monasteries and monastic activities lie at the core of the religion, anyone can follow the Eightfold Way. Meditation under the guidance of a senior monk, however, helps to train the mind's powers of concentration. An individual with a properly trained mind can discover the true nature of his or her desire for earthly pleasures and eliminate them. This includes rejecting purely intellectual attachments such as philosophical or religious beliefs. By eliminating desire, it is believed that humans can achieve nirvana and release themselves from the cycle of death and reincarnation in which one repeatedly experiences mortal suffering.

INFLUENCE

The Buddha's teachings were revolutionary within India because they rejected the assumptions of the existing Hindu social hierarchy. Buddhism denied the sacred authority of the Hindu religious texts whose teachings dominated ancient Indian society. It also was antagonistic to the elaborate rituals that were the cornerstone of the Hindu partnership between priests and aristocrats. The Buddha did not so much challenge as ignore the special role of

GREAT LIVES

The Buddha

In 563 B.C.E., according to Buddhist tradition, the historical Siddhartha Gautama was born to the queen and king of a small clan state in northern India. At birth, it is said, Siddhartha Gautama appeared fully formed and immediately took seven steps, a sign that he would become either a great king or a great religious teacher.

At age 19, Siddhartha Gautama married the Princess Yasodhara; ten years later, she gave birth to a son. Having fulfilled his family obligation to provide a male heir, Siddhartha Gautama began to wander outside the palace compound, where he confronted images of sickness, poverty, and death. These images distressed Gautama, who began to see the world as a place filled with evil and misfortune. He also saw a wandering holy man with no material possessions who nevertheless seemed filled with inner peace.

Impressed by the holy man's demeanor, Gautama determined to follow in his footsteps. Completely abandoning material possessions, Gautama spent the next six years attempting to conquer his worldly attachments, such as the desire for food, sex, and comfort. He sought out and studied under the greatest religious teachers of his age, and tried all the rituals and disciplined yogic exercises prescribed by the developing Hindu religion—to no avail.

Finally, in frustration, he sat under a Bodhi tree ("tree of wisdom") near the modern-day Indian city of Varanasi. For 49 days and nights he meditated in silence, enduring temptations from the evil spirit Mara. At sunrise on the fiftieth day he woke as the Buddha, the "enlightened one." He then rose and set out to teach humanity his enlightened "Middle Way," a moral life without extremes, based on the notion that a lifetime of sorrow could be negated by eliminating human greed. The Buddha spent the next 45 years spreading his message throughout northeastern India, accompanied by a band of monk disciples who continued to preach the Middle Way following his death in about 483 B.C.E.

priests in this system as the holders of the keys to salvation, as well as the privileged religious and social status of those claiming **aristocratic** descent. In contrast to Hindu society, Buddhism was inclusive of all social strata and promoted a communal lifestyle that violated the prevailing practice of occupational and gender separation.

Debate about whether or not it was necessary to follow a monastic life in order to achieve enlightenment was a major issue in early Buddhism. It was also the basis of an eventual split between Theravada Buddhists, who said that one had to be a monk to attain full enlightenment, and Mahayana Buddhists, who argued that the path to enlightenment was equally open to laypeople. Initially, the Theravada Buddhist sangha had assumed the major leadership role in the development of the Buddhist Church. By the second century B.C.E., however, some monks felt that the Buddhist sangha had themselves become a new religious elite, little different from Hinduism's Brahmin priesthood. The reformist monks formed the rival Mahayana ("Universal or Greater Vehicle") Buddhist sangha, calling the coexisting older monastic Buddhism Hinayana ("Lesser or Individual Vehicle"). The Mahayana monks took their missionary activities beyond the walls of the monastic compound to work directly in lay communities.

Over time, followers of the Mahayana tradition began to worship the Buddha himself, who might be asked to grant divine favors. In these Mahayana teachings, the Buddha had five states of existence (the five Tathagata): the Historical Buddha Siddhartha Gautama, the Cosmic Buddha Dainichi, the Amitabha or Amida **Celestial** Buddha, the Bhaisajyagu Healing Buddha, and the Maitreya Future Buddha. These are all central figures of worship in Chinese, Japanese, and Tibetan Buddhism.

Mahayana followers believe that the Buddha was assisted by *bodhisattvas,* or male and female "saints." Like the Buddha, the bodhisattvas had achieved nirvana in this lifetime but had chosen to remain temporarily earthbound to assist humanity in their quest for salvation. At death, the bodhisattvas became divine assistants to the Buddha. Gods of other religious traditions, such as the Shinto spirits in Japan, were incorporated into Buddhism as lower-ranking bodhisattvas.

Vajrayana Buddhism offers an alternative path to enlightenment through the use of special techniques, chants, and rituals known collectively as tantra. Theravada and Mahayana Buddhists believe that it takes many lifetimes to reach nirvana, but Vajrayana followers claim that a person can achieve full enlightenment in a single lifetime through the use of tantra techniques. Despite these differences, Vajrayana Buddhists believe that Theravada and Mahayana doctrines form the basis of Vajrayana practice and that they are all legitimate paths to enlightenment.

See also: Angkor Wat; Art and Architecture; China; Culture and Traditions; Hinduism; India; Japan; Java; Religion; Silk Road; Society; Sri Lanka; Vietnam.

FURTHER READING

Gombrich, Richard F. *How Buddhism Began: The Conditioned Genesis of the Early Teachings*. London: Routledge, 2006.

Robinson, R.H., and W.L. Johnson. *The Buddhist Religion*. Belmont, CA: Wadsworth, 1988.

China

The dominant force in shaping eastern Asian civilization culturally, politically, and economically in the premodern **era**. From about 4000 B.C.E., prehistoric settled farming communities developed in northern and central China, in the Yellow and Chang River basins. At first these took the form of tribal and regional clan states; around 2200 B.C.E., they emerged as Asia's earliest imperial government.

Early Chinese learned to cultivate dry rice (millet), sorghum (grain-bearing grass), and wheat sometime after 4000 B.C.E., and these grains became their dietary staples. They also built a network of dikes to protect their crops from the devastating annual flooding of the Yellow River plain. Many historians believe that the magnitude of coordinating the construction and maintenance of these Yellow River dikes necessitated the emergence of China's earliest imperial government, the legendary Xia dynasty (ca. 2200–1766 B.C.E.). The events of this era are portrayed in numerous Chinese folktales that relate the mythical accomplishments of China's first emperors, the importance of ancestor worship and animistic forces in the everyday lives of the Chinese people, and the development of regionally powerful clans.

FROM TRIBE TO EMPIRE

Recorded Chinese history begins with the Shang dynasty (1766–1122/1027 B.C.E.), which reigned over the northern Yellow and Chang River basins, eventually settling in its sixth imperial capital at Yin, modern Anyang. Shang farmers cultivated dry rice and wheat and raised domesticated livestock, while the aggressive Shang warriors expanded the borders of their empire by attacking neighbors to acquire land, resources, and slaves. The Shang dynasty was especially noted for the development of bronze technology and the use of elaborate bronze vessels in religious and state rituals.

Clan States

The subsequent era of the Zhou dynasty (1122/1027–403 B.C.E.) began with the overthrow of the Shang rulers by one of several militant regional clans. From their imperial capital near modern Xian, Shang rulers reigned over a network of semiautonomous regional clan states. Chinese historians

MILESTONES IN ANCIENT CHINESE HISTORY

CA. 4000 B.C.E. Settled farming communities develop in the Yellow and Chang River basins

CA. 2200–1766 B.C.E. Legendary Xia dynasty establishes China's first imperial government

1766–1122/1027 B.C.E. Shang dynasty marks beginning of recorded Chinese history

1122/1027–403 B.C.E. Zhou dynasty establishes imperial authority over a network of subordinate regional states

CA. 500s B.C.E. Origins of Confucian philosophical tradition and Daoist religion, doctrines central to subsequent Chinese secular and sacred tradition

403–222 B.C.E. Era of Warring States follows collapse of Zhou authority; six powerful warlord states vie for control over China

222 B.C.E. Qin state emerges victorious over its rivals and establishes ruling dynasty

206 B.C.E. Han Gazou leads overthrow of Qin state; establishes Han dynasty

206 B.C.E.–C.E. 220 Han dynasty; China annexes Mongolia and Korea and opens Silk Road trade route to the West

C.E. 220–581 China undergoes extended period of disorder following collapse of Han dynasty

C.E. 581–618 Sui dynasty restores imperial authority

C.E. 618–907 Tang dynasty; era of Chinese openness to new ideas and cultural innovations

C.E. 907–960 Regional states establish autonomy during Period of Five Dynasties and Ten Kingdoms that follows fall of Tang dynasty

C.E. 960–1279 Song dynasty, especially noted for artistic achievements in literature, painting, dance, and drama, as well as technological innovations such as gunpowder and moveable type printing

C.E. 1252–1279 Mongol lord Kublai Khan wages prolonged war against the Song, ultimately conquering China and founding the Yuan dynasty

C.E. 1279–1368 Mongol Yuan dynasty aggressively attempts to expand Chinese territory into what are now Myanmar and Vietnam and launches failed amphibious invasions of Java and Japan

C.E. 1368–1644 Ming dynasty marks return to ethnic Chinese rule; policy of commercial and cultural exchange leads to period of economic prosperity and social stability

characterize this as a network of **city-states**, emphasizing the emergence of important regional urban centers. Western historians often describe them as "feudal states," because the Zhou dynasty created a network of subordinate regional states under a landed **aristocracy**, comparable to the socioeconomic organization of Europe during the Middle Ages.

The Zhou era was also the **classical** age of Chinese intellectual inquiry. Both the Confucian philosophical tradition and Daoist religion originated in the sixth century B.C.E. Confucianism and Daoism proposed alternate paths to human fulfillment. While Confucianism advocated commitment to a **hierarchical** secular social order, Daoism emphasized that humans should withdraw from the affairs of everyday life to celebrate the ultimate reality and preeminence of nature.

TURNING POINT

Chinese Civil Service

Chinese civil service examinations were recorded as early as 165 B.C.E. The resulting appointments filled vacant government positions on the six imperial bureaucratic government boards: personnel, rites, public works, war (provisioning the military rather than commanding it), revenue, and justice. Appointees served at one of three levels of government: local, provincial, and the imperial court. Applicants underwent written examinations; passing each of three exams qualified the candidate for successively higher government appointments.

In theory, the Chinese civil service was open to any adult male, regardless of wealth or social status. In practice, however, preparing for the exams was costly and time consuming. Because China lacked public schools, candidates had to study under the direction of a private tutor. As a result, most successful candidates came from a hereditary class of wealthy landholding gentry, who had the resources to afford private education. Aristocrats had an additional incentive to fill the posts: at least one family member from each generation was required to pass the exams in order for a family to maintain their aristocratic status. However, passing the exams was no guarantee of personal success. Because there were not enough positions to employ all qualified applicants, only about 5 percent of those who took the exams passed them and received government posts.

The civil service and examination systems were also the critical means by which the Chinese government maintained the loyalty of the elite classes, or *shih*. Only those who had passed the exams, whether or not they received government positions, were allowed to communicate directly with the government. Thus, non-shih had to secure the services of non-officeholding shih in order to have dealings with the government. Shih businessmen frequently received profitable government contracts and commissions not available to non-shih.

The system, however, often produced too many expectant shih, who believed they were entitled to receive benefits as the government's local agents. In fact, many shih depended on commissions as a valuable supplement to the family's land-derived income. Dynastic decline normally coincided with the court having too few rewards to distribute in order to retain the loyalty of the shih. As the opportunities for appointments or rewards diminished, the elite began to think in terms of their self-interest rather than remaining loyal to the imperial court, hastening the dynasty's fall from power.

In the late fifth century B.C.E., the Zhou confederacy collapsed, leading to the Era of the Warring States (403–222 B.C.E.), when six regionally powerful warlord states competed in a series of battles and began to **annex** their smaller neighbors. In the late third century, the Qin state's forces emerged victorious under the leadership of the general Qin Shihuangdi (r. 221–210 B.C.E.), who became the first Qin emperor.

Qin China

Qin Shihuangdi organized the former clan states into new territorial provinces, in part to break up the longstanding regional associations of the **hereditary** family clans. Three state officials supervised each province—one to administer the civil administration (for example, justice, police affairs, public works, record-keeping), a second to manage provincial finances (collecting and redistributing taxes), and a third who was in charge of provincial troops. Each official was encouraged to report the activities of the others to the emperor, which in effect created a system of checks and balances. This system of provincial appointments became the basis of China's imperial bureaucracy, which was initially filled with candidates favored by the emperor.

The Qin state minister Li Si (280–208 B.C.E.) played a significant role in imperial administration,

The ancient Chinese were great technological innovators, creating engineering marvels such as the Great Wall of China and the Grand Canal, pictured here. Begun in the fifth century B.C.E., the canal at one time reached a length of 1,500 miles (2,400 km) and connected six Chinese river systems. (Yann Layma/The Image Bank/Getty Images)

attempting to standardize not only Chinese weights and measures, but also life in general. His administrative innovations were based in the school scholars call Confucian Legalism, which advocated a strong interventionist state rather than a disengaged imperial authority that ruled by moral example. To ensure a singular and unchallenged Qin authority, Li Si banned and ordered the burning of books that expressed dissenting political views. When Shihuangdi died, Li Si tried to assume power, but because the Chinese had turned against the Qin policies that Li Si had worked so hard to support in the past, Li Si's efforts failed. The aristocracy were unwilling to entrust power to someone who held the now unpopular Qin views.

Han Gazou (r. 206–195 B.C.E.), a man of peasant birth, led the armies composed of disaffected Qin subjects that deposed the Qin and established a new dynasty. The new Han emperor and his successors (the Han dynasty ruled from 206 B.C.E. to C.E. 220) initially moderated the Qin centralization by temporarily allowing the old clan-based gentry to administer the new territorial divisions. Han rulers, however, gradually reintroduced the Qin administrative innovations, which they saw as the only logical means to administer their vast domain.

HAN, TANG, AND SONG CHINA

The high point of the Han dynasty is associated with the emperor Han Wudi (r. ca. 141–87 B.C.E.), who built on his predecessors' successful consolidations. He annexed Mongolia and Korea, and successfully stabilized China's western border. A series of military victories resulted in a peace settlement with the central Asian steppe tribesmen who threatened China's western borders. This settlement also allowed the opening of the Silk Road trade route, as the tribesmen agreed to protect travelers on the

overland passageway that connected China to India, Persia, and the Roman West.

Han Wudi modified the Qin Confucian state, instituting a three-part national government consisting of the bureaucracy, the imperial court, and a professional military. The main qualifications for appointment included demonstrated ability and meritorious service; social class or status played no role in the selection process. Under Han Wudi, the state controlled and regulated commerce, notably to ensure that grains and other basic commodities such as salt were available at a reasonable price in the marketplace, that merchants conducted their business fairly, and that the government would have access to iron for its military needs. He also implemented Confucian **historical analysis**, which looked upon the past, especially historical figures, as the source of lessons for the present.

Han emperors faced periodic rebellions, including an uprising led by the peasant Wang Mang that temporarily overthrew Han rule (ca. C.E. 9–23). The victorious peasant armies, however, were unable to establish stable leadership, and Han forces restored the dynasty. However, the emperor's relatives, landed elites, Confucian bureaucrats, and the palace corps of eunuch imperial guards all periodically plotted to control the court's policies. This internal intrigue toppled the Han dynasty in C.E. 220; a series of smaller states run by warlords replaced the centralized empire.

Disorder, Displacement, and Change

With the fall of the Han dynasty, northern China faced 400 years of periodic raids by warriors (among these eastern Hun **seminomadic** tribesmen from the steppe grasslands of central Asia), and warfare among the powerful regional warlords. Buddhism spread from India to China, offering many Chinese a more satisfying religious solution to the generalized disorder than did local beliefs. For example, Buddhism offered the promise of an afterlife that Daoism did not. Traditional Chinese Confucianism strongly promoted involvement in **secular** affairs, but this focus was inconsistent with an age in which the secular realm was seen as particularly corrupt.

A large-scale exodus of the old Confucian aristocracy south of the Chang River helped to spread Buddhism beyond northern China at this time. It also resulted in the spread of Han culture into southeastern China, which previously had been under Han political authority but had retained most of its local culture. Denied access to the central Asian Silk Road, the Han elite were forced to find a new way to satisfy their desire for imported luxury goods. This led directly to the development of the Indian Ocean **maritime** trade.

Return to Imperial Order

Dynastic stability returned under the Sui (C.E. 581–618), whose military victories allowed them to consolidate their authority over northern and central China. The Sui, like the Qin, were aggressive in reestablishing dynastic order. The most noteworthy achievement of the Sui was the construction of the Grand Canal, which linked the productive eastern Chang basin to Beijing in the north. This allowed surplus wet-rice production from southern China to reach needy consumers in northern China. Increasing the volume of accessible rice in the north stabilized the price, ensuring that consumers throughout the realm could afford to buy rice.

The Sui ultimately overextended, committing vast human and financial resources in their resurrection of the Han realm and incurring heavy military expenses to secure China's western frontier. Popular revolts, assassinations, and internal disloyalty provided the opportunity for the Sui regional governor Li Yuan (C.E. 566–635) to seize authority and restore order under the new Tang dynasty (C.E. 618–907).

The Tang dynasty is frequently referred to as China's "Cosmopolitan Age" because of its openness to new ideas and cultural options. People of diverse ethnicity flowed into the capital city of Changan (modern Xian) by way of the reopened Silk Road. The Tang state institutionalized the Confucian examination system to secure qualified candidates for public office. In contrast to the Han-era exams, which tested the candidate's memorization, the new neo-Confucian examinations forced candidates to apply what they had learned by writing essays that addressed difficult situations they might face. This would demonstrate their ability to resolve real problems once they received political appointments.

CHINESE DYNASTIES, 1122 B.C.E.–C.E. 1365

Early Chinese history is marked by the transitions from one imperial dynasty to another, especially as seen in the changing borders of China's empires. The earliest dynasties were centered in the north. China reached its height during the Yuan dynasty.

Like the Sui, the Tang ultimately collapsed due to the financial drain of funding troops needed to defend China's northwestern borders. After the dissident An Lushan led a temporarily successful military rebellion against the Tang in 755–757, later Tang emperors became overly dependent on the support of regional governors. Tang authority collapsed in 907, as the regional governors established

their own autonomy in what is known as the Period of Five Dynasties and Ten Kingdoms. Ultimately one of these, the Song, renewed dynastic authority in 960.

The Song dynasty (960–1279) applied the broadly based neo-Confucian logic that human creativity stimulates human intelligence to constructive activity. During the Song era, such constructive activities included developing new technologies, among them printing with moveable type, gunpowder weapons, and improvements in navigation. The Song era is especially known for its artistic achievements, notably its literature, poetry, paintings, and contributions to the development of Chinese classical dance and drama. It was an age in which the traditional classes and genders more openly mixed, as merchants and gentry in particular shared in literary conversations at popular teahouse cafes. Urban residential districts became open to cross-class residence based on wealth rather than on birthright. Indeed, retrospective Chinese accounts of the Song criticized the dynastic leadership for being overly "relaxed," thus making China vulnerable to foreign invasion.

CONQUEST AND RESTORATION

The Mongol conquest of 1279 shocked the Chinese, who never before had been subject to rule by non-Chinese. The Mongols were warriors from the steppes of northern central Asia, whose forces conquered and temporarily controlled almost the entire Asian continent by the late thirteenth century. The Mongol lord Kublai Khan waged a prolonged war against the Song from 1252, finally completing his conquest in 1279 and founding the Yuan dynasty (C.E. 1279–1368).

The Yuan rulers, who were marginally literate warriors, recognized that they needed help from Chinese bureaucrats to rule successfully over China's vast non-Mongol population. They were suspicious of the Chinese Confucian gentry, however, so they frequently recruited foreigners from among their other realms to assume top-level administrative posts. Seeing how readily the Yuan adopted China's existing governmental system, employed its Confucian bureaucrats, and accepted its cultural practices, the Chinese concluded that their civilization must be the best in the world. Such cultural arrogance would prove a long-term liability as later Chinese dynasties turned inward, shutting off the country from outside influences and innovations.

The Yuan were aggressively expansionist. Following his conquest of China in 1279, Kublai Khan sent his troops south to fight in what are now Myanmar and Vietnam. The Mongol fleet also carried troops to attack Vietnam and Java. All of these attempts to extend Yuan power were costly failures, especially Kublai Khan's disastrous invasions of Japan in 1274 and 1281. Kublai Khan's successors found themselves weakened by his debts and increasingly isolated as the Mongol realm fragmented into regional kingdoms in the fourteenth century. These developments, paired with general Chinese dislike for their alien rulers, left the Yuan vulnerable to overthrow by resurgent Chinese forces led by Ming generals.

The Ming dynasty (C.E. 1368–1644) was intent on reestablishing the pre-Yuan Confucian bureaucratic system. The Ming emperors attempted to restore the Tang system instead of maintaining the more "relaxed" policies of the Song, whom they held accountable for the fall of China to the Mongols. The Ming also followed in the footsteps of the Yuan in their early foreign initiatives. In 1405–1433, Ming rulers sent General Zheng He (1371–1433) and his fleet of more than 300 warships into the Indian Ocean as a declaration of China's interests beyond its borders. After Zheng He's death these voyages ceased. In part this was because conservative Confucian political factions convinced the Ming emperors that such internationalism was too expensive and unnecessary. Some also argued that it was detrimental to China's military priority, which was defending its northern borders from barbarian invasions. Thereafter, Ming military investments focused on rebuilding the Great Wall and preparing for an invasion from the central Asian steppes.

In 1500, Ming China had the resources and productivity to provide for its society's basic needs. Rather than retreating into isolation, it maintained diplomatic and commercial contacts with its

neighbors. It openly solicited imported luxuries, not just in satisfying the desires of Chinese consumers, but also because overseas trade was a major source of the Chinese government's tax revenue. Ming China was the source of products such as porcelain, silk, and tea that the remainder of the world desired. The international demand for these products benefited Chinese producers and merchants, as well as the Chinese government. This commercial prosperity, paired with China's broad range of previous societal innovations, reinforced China's cultural self-confidence, creativity, and desire to avoid the costly wars of its past.

See also: Agriculture; Archeological Discoveries; Buddhism; Confucianism; Culture and Traditions; Huns; Indian Ocean Trade; *Pax Sinica;* Silk Road; Society; Technology and Inventions; Tools and Weapons.

FURTHER READING

De Bary, William Theodore, and Irene Bloom, compilers. *Sources of Chinese Tradition*. 2nd ed. New York: Columbia University Press, 1999.

Ebrey, Patricia Buckley. *China: A Cultural, Social, and Political History*. Boston: Houghton Mifflin, 2006.

Hucker, Charles O. *China's Imperial Past, An Introduction to China's History and Culture*. Stanford, CA: Stanford University Press, 1994.

Confucianism

A once-dominant ancient Chinese religion based on the teachings of the sage Confucius (Kungfutzu, 551–479 B.C.E.). Unlike other teachers of the time, Confucius believed that it was possible for all people, regardless of their station in life, to do right. He taught "right relations," which included benevolence, respect for superiors, and piety.

THE CONFUCIAN IDEAL

Confucianism is a set of ethical rules or a moral philosophy rather than a formal religion. It avoids discussion of a divine being and is vague in its views of the afterlife and otherworldly matters. The Confucian ideal is a ranked or **hierarchical** social and political order that is made up of status groups and graded roles, from the ruler at the top through officials and gentry (a landed and educated elite) to the family head. According to Confucian philosophy, the key to effective authority is setting a good example through "right relationships" in order to ensure "virtuous behavior."

In Confucian **doctrine**, the individual is like a stray nail sticking up that needs to be pounded down in order to protect the group's common interests. Confucianism encourages the subjection of the individual to the greater good of the family and society. Individualism and freedom are seen as the consequence of selfishness and a lack of rules. The result of both is chaos and anarchy, or lawlessness, from which everyone suffers. Society then, through a set of laws, must evolve its own balance between individual actions and the need to protect the group.

Confucius believed that a formal legal code and the threat of punishment are no guarantee of individual virtue or social harmony. He also believed that, in a properly run society, rules and punishments are ineffective and unnecessary. In the ideal Confucian order, people *want* to do right, which is achieved only by making the Confucian ethical code of correct social relationships a part of one's own thinking. Violence is only a last resort, when the social system has broken down.

TWO SCHOOLS OF BELIEF

Early Confucianism, as popularized in the writings of the scholar Mencius (Meng Tzu, ca. 371–289 B.C.E.) presents a highly optimistic view of humanity and society. Later Confucian scholars, collectively

GREAT LIVES

Confucius

According to tradition, the Chinese sage Confucius was born about 551 B.C.E. in the feudal state of Lu in what is today Shandong province. His father, who was 70 when Confucius was born, died when the child was three, and Confucius's mother brought the boy up in poverty. Although details of his life are shrouded in uncertainty, he appears to have worked a variety of jobs as a young man, including a shepherd, a cowherd, and a bookkeeper. He eventually obtained a government position as an administrative manager in the state of Lu, and at age 53 he was appointed the state's Justice Minister. He left that position for reasons that are unclear, but that may have been related to the enthusiasm with which he promoted his beliefs to his superiors.

After leaving Lu, Confucius traveled to a number of states in northern and central China, hoping to interest rulers in implementing his ideas. Although he was unsuccessful in gaining official recognition, Confucius attracted a large number of adherents among China's intellectual classes, many of whom occupied influential government positions. His disciples promoted and spread his ideas and later compiled the *Analects,* a collection of sayings and short dialogues that form the primary source for information about Confucius and his philosophy. Confucius died in about 479 B.C.E., and it would take another 300 years for his ideas to be widely adopted in China. His teachings continue to influence Chinese society today and have also spread to Taiwan, Japan, Korea, and Vietnam.

known as "legalists," had a very different perspective. They argued that humans drift naturally toward chaos and thus require an intervening force, or the threat of force. Confucian legalists believed that people need a formalized code of law to achieve and maintain universal social harmony.

Both traditions, however, affirmed peoples' right to rebel against immoral or unjust rulers, leaders who had forfeited the "Mandate of Heaven" by their own lapse from virtue. While loyalty to superiors was the basic commandment of Confucianism, commitment to moral principle could prevail, especially in times of corrupt leadership. This situation, however, presented individuals with a severe dilemma—loyalty to leader versus commitment to moral principle. Consequently, civil disobedience was extremely rare, and, however unjust, authorities (from the emperor at the top to one's parents on the bottom) were rarely challenged.

POLITICAL, SOCIAL, AND RITUAL TRADITIONS

Confucian ethics were eventually incorporated in the Chinese imperial examination system during the reign of the Han emperor Wudi (r. ca. 141–87 B.C.E.), with officials selected from among the educated classes. The result was a system that was, in theory, open to candidates of any social class or rank. Because China had no public schools, however, only the wealthy were able to afford the education needed to pass the exams. The gentry thus dominated the examination system and the Chinese bureaucracy. The entry of upwardly mobile lower-class individuals, although not impossible, was extremely rare.

Confucianism taught followers to honor hard work, achievement, material prosperity, and the enjoyments that "self-cultivation" produced. Confucians especially revered bearing children and attaining an old age of leisure surrounded by one's successful descendents. According to Confucianism, the natural world was the orderly model for the human world. Nature was thought to be a nurturing power, not a hostile one, to be admired and preserved, and to which people should adjust rather than attempt to conquer. Natural calamities, such as floods, droughts, or earthquakes, were commonly taken as the consequence of heaven's displeasure at the lack of virtue among China's rulers.

In the Confucian view, time was cyclical, and there was a repetitive rhythm to both natural and human existence. For example, Confucianism recognized the inevitability of the fall of a **dynasty** due to what the Chinese referred to as the "fat cat" syndrome. According to this syndrome, China's virtuous leadership should maintain order and anticipate natural disasters, for example, by initiating innovative public works projects and storing surplus production in prosperous times. Instead, rulers often chose to use public funds to pay for their luxurious lifestyle. Confucians argued that such nonvirtuous leaders were destined to fall.

Confucianism was also China's "state religion," in which the emperor presided over rituals at the imperial capital. These rituals were to intercede with heaven or to commemorate imperial ancestors to secure general public welfare: good harvests; rain; and the end to floods, epidemics, famine, and civil chaos. Sometimes the rituals were designed to acknowledge the inappropriate or unethical behavior among the ruling elite in the hopes of persuading heaven to restore society's prosperity.

The Confucian assertion that heaven is an impersonal force superior to humankind did not adequately explain spiritual existence, so many people turned to other religions, while continuing to maintain their Confucian beliefs and ritual practices. For example, many people embraced the Daoist naturalist philosophy and the Buddhist explanation of the afterlife. Daoism and Buddhism both depend on a formal priesthood and sets of universal rituals. Daoist and Buddhist temple worship encouraged Confucians to build their own temples, where illustrious figures of the local past were granted imperial recognition and were eventually worshipped as the community's imperially sanctioned guardian deities. Chinese folk religions, which invoked divine intervention through offerings to local spirits or deceased ancestors, also claimed many adherents.

Popular Confucianism extended respect for the contemporary elders to those who had gone before, as the ancestors became valued models, and ancestral rituals at small household and community shrines kept their memory alive. It was the duty of the eldest son to perform rituals on the death of his father, through successive generations, keeping the ancestral chain intact and thus ensuring family continuity. Maintaining the family line was so important that the greatest sin under Confucianism was to have no descendants (specifically male offspring because women left their parental family at marriage and became members of their husband's family). This attitude has perpetually favored sons and has encouraged couples to conceive as many children as necessary to produce a male child.

The ancient teachings of Confucius have defined traditional values and the ideas of proper behavior in modern China. Although once out of favor in the People's Republic of China, Confucian practices have become more visible in the past two decades, and live on in modern Taiwan, Korea, Japan, Vietnam, and the overseas Chinese communities resident in Southeast Asia.

See also: Art and Architecture; China; Culture and Traditions; Japan; Korea; Society; Vietnam.

FURTHER READING

Ebrey, Patricia. *Confucian and Family Ritual in Imperial China*. Princeton, NJ: Princeton University Press, 1992.

Elman, B. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.

Mann, S., and Y. Chang. *Under Confucian Eyes: Writings on Gender in Chinese History*. Berkeley: University of California Press, 2001.

Miyazaki, Ichisada. *China's Examination Hell: Civil Service Exams of Imperial China*. Translated by Conrad Schirokauer. New Haven, CT: Yale University Press, 1981.

Culture and Traditions

Before C.E. 1500, local innovation and adaptations of the advanced cultural forms found in India and China characterized Asian society. The northern Indian Hindu-Buddhist culture of Gupta India spread to southern India in the sixth century B.C.E. and then to Southeast Asia. A century later, Korea and Japan adopted many aspects of the Chinese civilization of Tang China and adapted them to local life.

These diverse ancient societies were marked by increasing political, economic, and societal centralization, often the result of military conquest. Rulers of the Mauryan **dynasty** in India (founded about 400 B.C.E.) and the Qin dynasty in China (founded about 221 B.C.E.) were the first Asian leaders to take the title of emperor rather than king, considering themselves entitled to this lofty title as a consequence of their military victories and **annexations** of rival kingdoms.

In the aftermath of these dynasties, Chinese and Indian cultures took different courses. Indian culture was dominated by Hindu and Buddhist traditions and therefore became centered in temples rather than the royal court beginning in the Gupta **era** (ca. C.E. 320–550). Chinese culture, on the other hand, remained controlled by the **monarch** and his court, and therefore, from the Tang era (C.E. 618–907) on, was dominated by **secular** ideals rather than religious customs.

GENDER AND FAMILY LIFE

Official Indian and Chinese government texts drew a portrait of societies in which men were active in the realm outside the house and the women prisoners in it. Popular stories, legal documents, and other local accounts, however, demonstrate that there was not such a clear division of labor. Asian women were often economically active in the marketplace, profiting as matchmakers and serving as midwives delivering babies. Girls could learn to read and write from their educated fathers and brothers.

Chinese and Indian women often exercised substantial power within the family political arena, depending on their position in the extended family's **hierarchy**. Mothers were involved in the selection of marriage partners for their children and in the use of family income as this directly related to their children's marriage prospects.

Wealthy families could afford to keep their wives and daughters at home, while the less economically advantaged could not. In early China and India, it was not unusual for women to outlive their husbands, because women commonly married older men. Although both societies frowned on remarriage, widow remarriage was not unusual when the woman's surviving family was not able to support her and her children or did not have a male of sufficient age to insure the family's future.

Chinese women who had married a prosperous husband faced the likelihood that their husband would take at least one concubine. According to Chinese tradition, the wife should not be jealous because her family rank and that of her children were always above that of the concubine and her children. In practice, an attractive and younger concubine might have more influence on the husband than did the wife, despite the concubine's lower rank.

Having married children ensured a woman's future. Daughters-in-law were obliged to do most of the cooking and housekeeping, allowing the grandmothers to enjoy their grandchildren. Many elite women were literate and served as their grandchildren's first teachers, and also composed poetry and carried on correspondence with other women using a secret "woman's language," a kind of coded adaptation of standard Chinese understandable only to those familiar with the code.

During the Song dynasty (C.E. 960–1279), foot binding became popular, as Chinese men of the

Ceremonies that mark important life transitions, such as marriages and funerals, typically feature traditional social customs and rituals. This Hindu bride-to-be in Bombay, India, follows the ancient practice of decorating her hands with henna, a reddish-orange plant dye. (Roger Ressmeyer/Louie Psihoyos/Science Faction/Getty Images)

time considered small feet on women to be particularly attractive. Over time, however, the practice became a mark of social distinction, elegance, and beauty that eventually spread among all classes. Mothers bound their daughters' feet between the ages of five and eight, using long strips of cloth to keep their feet from growing, and to bend the four smaller toes under to make the feet narrow and arched. An **aristocrat's** feet were bound so tightly that she could barely walk and had to depend on servants. The feet of lower status women were bound less tightly, because they needed to work in the household and perform farming chores, despite their handicap. The practice of binding typically resulted in physical deformity and often led to degenerative diseases of the feet.

LEGAL CULTURE

Classical Chinese law was shaped largely by the Confucian legalistic tradition that advocated a rigid written legal code to maintain political power and social control. In contrast to the Chinese tradition of civil law, countries in southern Asia and most of neighboring Hindu-Buddhist Southeast Asia based their legal codes on the *Dharmasastra* Hindu texts that developed between 600 B.C.E. and C.E. 500. The *Dharmasastra* texts defined universal obligations and penalties, but these were always subject to local caste and religious codes that defined proper morality, duty, and obligations.

Chinese Legal Culture

The Chinese legal system tended more toward a

"rule by law" rather than a "rule of law." This required severe penalties that would discourage disobedience: public humiliation, hard labor, physical mutilation, banishment, slavery, or death.

The Confucian moral code advocated continuous self-cultivation and the performance of one's proper social role in a **hierarchically** structured society. Aggressive selfish behavior was unacceptable. Because criminal activity was considered the byproduct of improper family management of its individual members, the relatives of a convicted criminal could also be punished.

Most labor penalties lasted from one to six years; mutilation could include shaving the offenders' beard or head, branding, cutting off a nose or foot, or castration. The sentence of death could take several forms, including being torn apart by horse-drawn chariots, although decapitation and hanging were the usual norms. Penal labor was the usual penalty for theft or other civil crimes. Even those who were required to pay fines might have to work off the sentence over a stipulated term of servitude. Those with servants or wealth could receive credit for work performed by others in their place. Males might redeem their relatives by performing services on their behalf.

Laws were intended not only to regulate common people but also to constrain officials. There were rules for keeping accounts, supervising subordinates, managing penal labor, conducting investigations, and appropriately dealing with the public. Officeholders who violated this code of conduct were fined, lost their official positions, might be reassigned to a bureaucratic post on a distant frontier, or, in extreme cases, could be executed.

The Chinese legal system depended on magistrates who were state bureaucrats rather than appointees who had local roots. Private lawyers were prohibited, because they were considered to be social parasites whose involvement was more likely to result in further disputes than in a peaceful resolution. The government magistrate was both the judge and prosecutor (Chinese law thought the accused was guilty until proven innocent), but he was expected to thoroughly investigate a case and to impose a fair sentence. A case could be reopened if one party claimed to be the victim of injustice. To negate corruption and wrongful verdicts, the Chinese state held the magistrate absolutely responsible for mistakes of law or fact, regardless of good intentions or absence of malice. To protect themselves from reprisals, magistrates tried to avoid accepting formal complaints and instead devoted most of their efforts to the mediation of settlements rather than formal litigations inside their courtrooms.

The Chinese legal system made allowances for or penalized criminals according to the extenuating reasons for a crime. Among these was the failure to avoid inauspicious days in taking an action, improperly sacrificing to and burying the dead, and in marrying—all of which allowed the demons and maligned spirits to work their will. An individual's crime might also be blamed on another family member who was negligent in his or her ritual actions, thus making the guilty relative unknowingly vulnerable to a maligned spirit's reprisal.

By the Tang Dynasty era (C.E. 618–907), under the *Tang Code with Commentaries* (624), there were three mandatory automatic reviews of a sentence of death before an execution could take place. Family members could appeal any conviction all the way to the emperor, but they were subject to the risk of punishment if their appeal was ruled to lack merit.

Indian Legal Culture

In the *Dharmasastra* religious tradition, there was no hierarchy among the caste tribunals, and village and marketplace councils had overlapping legal jurisdictions. Every social group was allowed to formulate and apply its own customs and conventions. Law was not rigid but could be changed according to fluctuating local needs and to achieve the best interests of the local community. Ultimately, Indian courts made decisions consistent with the interests of the most powerful among the community's members, whose prominence rested on a combination of their political, economic, religious, and **hereditary** stature. Most local legal decisions resulted in expulsions and boycotts rather than the fines or the severe physical penalties that were typical of the Chinese court system. In theory, only a royal court could impose a death sentence.

A royal court of justice consisted of a king or emperor or his designated agent assisted by learned

Hindu and Buddhist clerics. Local justice could be appealed to royal courts, where kings made practical legal decisions based on their sense of common usage rather than a written code of law. For a case to go all the way to the royal court was highly unusual and put the community at risk because the king's justice would not necessarily conform with the community's interests. While the king was supposed to pass judgments consistent with the *Dharmasastra* and local traditions, ultimately kings made legal decisions based on their own best interests. Thus, it was likely that a community would choose to reach a local resolution rather than having the outcome dictated by the king.

MATERIAL CULTURE

By C.E. 1500, mainstream Asian cultures had adapted either the Indian or Chinese traditions, or mixtures thereof. As Asian societies became more centralized and commercialized, larger numbers of the local population were producing for the market, allowing Asians to enjoy a higher standard of living. Residents of the new urban centers as well as their networked rural hinterlands began to expect access to a wide variety of foods and material products. Among the consumables in high demand were Indian cotton and Chinese silk; Chinese, Thai, and Vietnamese porcelain ceramics; and Southeast Asian spices and exotic scented woods that had a variety of culinary, medicinal, and ritual uses.

Asians at this time expected to dress and eat better, and to enjoy some degree of luxury that had previously been available only to societal elite. A higher percentage of public literacy, combined with the development of the Asian printing industry, made affordable publications available to the general public, who were able to enjoy a wide range of popular literature and traditional classics. The newly affluent also patronized artists who, in the Chinese artistic tradition, created landscape paintings, scroll art, and portraits for eastern Asian consumers; and in the southern Asian artistic tradition, local artists produced religious and heroic art that was modeled on that of neighboring Persia.

Asian culture in C.E. 1500 was thus marked by wider consistency among increasingly integrated societies, as previously isolated regions and their populations linked into "national" cultures. There was also wider cross-cultural linkage between China and its neighbors in Korea, Japan, and Vietnam. Similarly, the populations in southern and Southeast Asia commonly shared in the Hindu and Buddhist traditions, and those in **maritime** Southeast Asia were beginning to accept Islamic cultural alternatives.

See also: China; Confucianism; Hinduism; India; Japan; Korea; Language and Writing; Slavery; Society.

FURTHER READING

Chamberlayne, Y., II. *China and Its Religious Tradition*. London: Allen and Unwin, 1993.

Cohn, Bernard S. *India: The Social Anthropology of a Civilization*. Englewood Cliffs, NJ: Prentice Hall, 1971.

Ebrey, Patricia B. *China: A Cultural, Social, and Political History*. Boston: Houghton Mifflin, 2006.

Hall, Kenneth R. *Maritime Trade and State Development in Early Southeast Asia*. Honolulu: University of Hawaii Press, 1985.

Varley, H. Paul. *Japanese Culture*. Honolulu: University of Hawaii Press, 2000.

Genghis Khan *See* China; Mongols.

Golden Horde

Western regions of the Mongol imperial confederacy that once connected the Middle East to China, established by the conquests of the Mongolian conqueror Genghis Khan (r. C.E. 1206–1227). The Golden Horde, which consisted of the Caspian steppes, the Crimea, the northern Caucasus, and the Ural basin in what became western Russia, was home to a collection of **seminomadic** tribesmen, farmers, and townspeople. This confederacy was financed by collecting taxes from farmers and townspeople along the Silk Road across central Asia, which since the first century B.C.E. had served as the overland trade connection between Europe and eastern Asia.

In contrast to the Mongols, who eventually **assimilated** into the urban Chinese and Persian civilizations they conquered, the Turkish tribesmen who founded the Horde retained their seminomadic culture. Mongol chieftains (*khans*) ruled the Horde indirectly, employing subservient native princes to carry out their orders. Mongol residents (*baskaks*) and, later, nonresident representatives (*posoly*) supervised the activities of the khans.

The Golden Horde reached the height of its power under Allah Khan Ozbeg (r. 1313–1341). During his reign, the Mongol khans, baskaks, and posoly converted to the Islamic religion, in part to strengthen their ties with their powerful Islamic Mamluk Egypt-based neighbors to the southwest. However, they remained tolerant of their Roman and Orthodox Christian residents rather than forcing them to convert as well.

Despite regular succession crises and the late fourteenth-century victories of Samarkand-based Tamerlane (d. 1405), a Turkik-Mongol who claimed authority as the rightful descendent of Genghis Khan, the Horde remained in power until the reign of Akhmar Khan (r. 1465–1481). In 1471–1472, Prince Ivan III of Muscovy defeated Akhmar's troops, and Akhmar himself failed to recapture Moscow in 1480. The last remnants of the Mongol realm collapsed in 1502, when Ivan allied with the Crimean khan Mengli Girei to crush the Horde's remaining centers of power.

The Golden Horde left a mixed legacy. It is often portrayed as the "barbarous horde" in the tradition of Tamerlane, who collected 70,000 enemy heads when he conquered the Persian city of Isfahan in 1387, and constructed towers made from the skulls of those he conquered on many other occasions.

Although not gifted statesmen, the Golden Horde khans provided leadership and united diverse tribes and multiethnic societies. Despite the end of Mongol rule in China in 1368, the Horde maintained the Silk Road connection between the West and China until 1453, when Constantinople, modern-day Istanbul in Turkey, fell to the Ottoman Turks. The Horde were religiously and culturally tolerant, in contrast to their Christian neighbors in the contemporary West, who regularly persecuted Jews, Muslims, and sects considered heretical by the Catholic Church.

See also: China; Islam, Spread of; Mongols; Silk Road.

FURTHER READING

Halpern, Charles. *Russia and the Golden Horde: The Mongol Impact on Medieval Russian History.* Bloomington: Indiana University Press, 1987.

Ostrowski, Donald. *Muscovy and the Mongols: Cross-Cultural Influences on the Steppe Frontier, 1304–1589.* Cambridge: Cambridge University Press, 1998.

Great Wall of China

See Archeological Discoveries; Art and Architecture; China.

Hinduism

Religious and societal tradition that originated in southern Asia about 1600 B.C.E. but did not reach its inclusive form until the fourth century C.E., during the reign of the Gupta dynasty in northern India (ca. C.E. 320–550). This evolution of Hinduism paralleled the development of early Indian society from its **seminomadic** origins to its culmination in the Gupta age.

VEDIC ERA: RITUAL AND SOCIAL ORDER

Hinduism began with the entry of Indo-Aryan seminomads into northwestern India (modern-day Pakistan) from central Asia's steppe grasslands around 1600 B.C.E. The Indo-Aryans imposed their sacrificial religion on previous temple-based fertility cults. Aryans worshipped their family ancestors at household altars and held large-scale public celebrations of **celestial** divinities, especially the war god Indra. Aryan religion is described in the *Vedas,* four texts that contain sacred hymns, the details of ritual performances, and the essential Aryan beliefs that would become the foundation of Hindu orthodoxy.

The *Rig Veda* (ca. 1800–1300 B.C.E.) not only provides the earliest Aryan hymns but also describes the multiethnic agricultural society that formed after the Aryan invasions. According to its hymns, the original male (known as Parusa) was dismembered in a celestial sacrifice. His mouth became the *Brahmin* class (priests and religious teachers), his arms the *Ksatriya* class (warriors and rulers), his thighs the *Vaisya* (economic specialists such as traders, landholders, and those who owned livestock), and his feet the *Sudra* servants (those who labored on behalf of the top three social ranks).

The Aryan *varna,* or class, structure became the basis of the later Indian caste system, which categorized the occupational subgroups appropriate to the four varnas. This **hierarchical** social model was detailed in later teachings as compiled in the Hindu codebooks, the *Dharmasastras* and *Dharmasutras.* These legal texts defined the *dharma,* or duties and behavior, appropriate to each occupational rank.

In the initial Vedic **era** (ca. 1600–1200 B.C.E.) the king represented divinity and sponsored the great sacrifices that ensured his society's success. As Vedic-era society became more settled (ca. 1200–800 B.C.E.), the ritual functions performed by the king and the heads of prominent extended families became the duties of a professional Brahmin priesthood. The Brahmin's duties were detailed in

ORIGINS AND GROWTH OF HINDUISM

CA. 1800–1300 B.C.E. Composition of *Rig Veda,* early Aryan hymns describing basic religious concepts

1600 B.C.E. Aryans migrate to India from central Asia; Hinduism originates from mixture of existing Aryan and Indian beliefs

CA. 1600–1200 B.C.E. Early Vedic era; Aryan Hindu kings rule over what is now India

1200–CA. 800 B.C.E. Professional Brahmin priesthood assumes ritual functions once performed by India's Hindu kings and family heads

1000–600 B.C.E. Composition of the *Upanishads;* spread of ideas of reincarnation, *karma,* and yogic asceticism; acquisition of knowledge as an alternative focus to Brahmanical ritual; formalization of early caste system

500 B.C.E.–C.E. 200 Composition of the *Bhagavad Gita,* which becomes basis of Hindu *bhakti* devotional tradition

CA. C.E. 320–550 Gupta dynasty rules northern India; Hinduism achieves modern form

sacred texts, which described the ever more elaborate ceremonies necessary to ensure the success of Hindu society. The kings were now the potentially forceful upholders of dharma (dutiful behavior) and, in partnership with the priesthood, were the guardians of the social and sacred order.

Subsequent religious texts debated the appropriate behavior of a king. The *Dharmasastras* ("the laws of dutiful behavior") suggested that the best kings provided leadership by awe-inspiring moral example rather than by directly engaging in public activities. In contrast, the *Arthasastra* ("the laws of self-preservation") argued that successful kings needed to be more aggressive, leading their troops to conquer new territories, defending against invaders, and directly policing the social order.

THE UPANISHADS: KNOWLEDGE AND SALVATION

The literate, landed **aristocracy** that emerged between 1000 and 600 B.C.E. asserted its capacity for religious activity rather than depending on the ritual services of the Brahmin priest. The *Upanishad* sacred texts presented their case, proposing that knowledge was an alternative to ritual as one pursued ultimate liberation from the realm of humanity. In the *Upanishads,* the universe had its origin in a creative force, *Brahman,* which was thought of as a source of creative energy rather than as a divine being. Later Hindu art sometimes depicted *Brahman* as a cosmic egg, from which comes life.

From *Brahman* come the individual souls (*atman*) that take living form as humans or animals. According to the divine plan, each soul enters the realm of humanity with a duty (*dharma*) that is appropriate to its place in the hierarchy of existence. Thus, a laborer should not perform the duties of a priest; nor should a priest perform the daily tasks of the laborer. The point is that an individual should fulfill one's appropriate dharma; not to do so would jeopardize universal (divinely ordained) order. Actions are supposed to be those appropriate to one's dharma, but ignorance and illusion lead to improper behavior, or sin.

Because of this moral pollution, the initially pure soul is no longer able to return to the purity of *Brahman,* and thus the self (the soul) is plunged into a series of rebirths. Moral and immoral acts thus have consequences, resulting in a series of rebirths. The soul moves from one unfulfilled rebirth to another, in either human or animal form, as a result of merit or demerit accumulated in prior existences. Death is not tragically final but marks the passage of the soul from one temporary form of existence to another in its ongoing quest for purity and, therefore, salvation.

The Hindu religion has its roots in the animistic beliefs of ancient India and central Asia. Many of the gods in the Hindu pantheon have counterparts among the nature spirits revered in other animistic traditions. (Harvey Lloyd/Taxi/Getty Images)

The *Upanishads* provide philosophical justification for caste and mandatory acceptance of one's place in the social hierarchy. They also provide a conceptual hierarchy that includes nonhumans. This explains why Hindus are frequently vegetarians; to kill and eat animals, which may possess the soul of an ancestor, is considered murder and cannibalism.

Later Hindu texts (*The Laws of Manu,* the *Yoga Sutras,* and the *Bhagavad Gita*) that elaborate on the *Upanishads* portray knowledge as an instrument for liberation from the cycles of rebirth. The consequence of liberation is the soul's return to *Brahman*. Knowledge is achieved by devoted physical and mental exercise (*yoga*) to eliminate the material and intellectual attachments that lead to illusion.

Only members of the three upper classes might achieve salvation at the conclusion of this lifetime by successfully passing through the four stages of life: student, householder, hermit, and ascetic. The ideal ascetic is the meditating intellectual who has withdrawn totally from society. By returning to the universal essence of *Brahman,* the permanent self ceases to exist and once again becomes part of the energy mass from which new souls will come.

THE BHAGAVAD GITA AND BHAKTI DEVOTIONALISM

In contrast to the ornate ritual traditions of the *Vedas* and *Brahmanas,* and the high-level intellectualism of the *Upanishads,* Hinduism developed a popular alternative. This alternative way is represented in the *Bhagavad Gita,* a subtext of the evolving *Mahabharata* epic tale that had its origin in the Vedic age. This epic poem, which tells the tale of the battle between two groups of Aryan warriors, was composed between 500 B.C.E. and C.E. 200. In it, the warrior hero Arjuna anguishes over his duty to kill. Lord Krisna intervenes, coming to earth as the divine persona of Visnu, one of the three supreme Hindu divinities, and assuming human form as Arjuna's charioteer and spiritual guide.

The *Gita* is a dialogue in which Krisna provides spiritual and philosophical guidance to the troubled Arjuna. The focal theme is unselfish action (or service), or disciplined action, in the performance of one's duty without expectation of reward. In the *Gita,* Krisna advises Arjuna to fight in the battle in performance of his duty as a warrior but to remain detached from the consequences. The practice of *karma yoga* in daily life makes the individual fit through action (in contrast to ascetic nonaction and meditation); moral action is the ultimate pathway of devotion to Krisna alone as God.

The *Gita* episodes became the basis of the Hindu *bhakti* devotional tradition. Followers of this tradition had an obligation to fulfill their dharma, but they did so through a commitment to moral behavior rather than being consumed in the service of self or, even worse, taking excessive pleasure in one's actions. Rather than ritual or asceticism, the bhakti worshipper committed to moral behavior, devoted service to God, and a loving relationship in which pure love of God wipes out all bad *karma* (the force generated by a worshipper's actions).

Bhakti devotional movements focused on the divine Siva (the "destroyer" and lord of fertility) and Visnu, the "preserver," who, with Brahma, the god of "creation" (a personification of the Upanishadic Brahman cosmic force), form the Hindu divine trinity (*Trimurti*). Each has *avataras* (male, female, and animal personas) and their subordinate divine (for example, Ganesa, Siva's elephant-headed son). Bhakti tradition does not conceptualize salvation as the achievement of nonexistence, or a passage to a heaven, but as a release in which the devotee becomes absolutely One-with-the-Lord, through an intense love in which two become one.

See also: Culture and Traditions; India; Java; Religion; Society.

FURTHER READING

Klostermeier, Klaus, K. *A Survey of Hinduism.* 2nd ed. Albany: State University of New York Press, 1994.
Lipner, J.J. *Hindus.* New York: Routledge, 1993.
Michaels, Axel. *Hinduism.* Translated by Barbara Harshav. Princeton, NJ: Princeton University Press, 2003.

Huns

Nomadic pastoral populations that, in the fourth century C.E., moved from the central Asian steppe grasslands into northern Iran and modern-day Afghanistan. Called *Xiongnu* by the Chinese, *Chionites* by the Greeks, and *Hunas* by Indians, the Huns launched a series of attacks in the fifth and sixth centuries C.E. against the settled **agrarian** societies of the Roman West, Persia, and Gupta India.

This image depicts Attila the Hun (ca. C.E. 406–453), known as the "Scourge of God," whose nomadic mounted warriors devastated eastern Europe and reached the gates of Rome in the mid-fourth century C.E. According to tradition, Pope Leo I (d. C.E. 461) convinced Attila to spare Rome and abandon his invasion of Italy. (HIP/Art Resource, NY)

GREAT LIVES

Attila the Hun—"Scourge of God"?

Western history and tradition refers to Attila (ca. C.E. 406–453), the fearsome leader of **seminomadic** steppe warriors known as Huns, as the "Scourge of God." His name is associated with cruelty and savage barbarism. Some of this negative portrayal, however, results from the biased writings of contemporary Romans who were subject to his conquests, and those who held him accountable for the destruction of Roman civilization. Later writers conflated Attila with other steppe warlords such as Genghis Khan (r. C.E. 1206–1227), who also had a reputation for savagery and bloodlust.

By contrast, the Roman historian Priscus, who visited Attila's camp in 448 on a diplomatic mission accompanying the Byzantine emperor Theodosius II, left a record that is filled with admiration for Attila. He praises Attila's personal stature and accomplishments as an able general who had united the various Germanic tribes and led them to impressive victories over the previously invincible Romans. Priscus also reports meeting with an eastern Roman captive resident in Attila's stockade residence, who had become content to live among the multiethnic residents of Attila's base and had no desire to return to the Roman realm.

The most famous of the Hun leaders was Attila (ca. C.E. 406–453), who led the western Hun hordes, then based in Eastern Europe, to victories against the Roman Empire. After his death, large segments of the Hun horde settled in Pannonia, east of the Danube River in modern eastern Austria and Hungary. Shortly after settling in this region, the Hun Empire fell apart as better-organized and militaristic steppe peoples, including early Bulgarians from the East, moved into the region.

In Asia, several waves of eastern Hun invasions were defeated by the Persian Sassanid Empire in the early fourth century. In 392, another Hun horde seized the regions of Bactria and Gandhara on the northwestern border of India. From there, they launched regular attacks against the Gupta rulers on India's northwestern frontier from the mid-fifth to the mid-sixth centuries. The Gupta kings successfully prevented Hun armies from entering the Ganges River plain, but the continuing effort drained the Gupta realm's resources and led to the end of the **dynasty** by about 550.

The original language of the Huns has been lost; following their invasions, Huns absorbed the languages of the regions they conquered or settled. The eastern Huns used the Bactrian script and language, which was a mixture of the Greek and Persian languages. They also imitated Persian coinage, and followed several of their predecessors' cultural practices, including cremation of the dead, use of the straight sword and compound bow, and the strange custom of artificially elongating their skulls upward, which is depicted in their coinage portraits.

Hun warriors were expert horsemen; each kept several small, tough horses. Warriors in battle would make quick cavalry charges, shooting arrows at their enemies, then retreating to mount a new horse. Using his string of horses, a Hun warrior could continue charging indefinitely. Opponents feared the Huns so much that many paid **tribute** to avoid being the target of Hun attacks. Until the time of the Mongols, most Eurasian populations saw the Huns as the ultimate symbol of ferocious barbarian cruelty and deceit.

Tributary payments by their neighbors, use and sales of war captive slaves, and the collection of ransom on war prisoners subsidized a comfortable lifestyle. Huns lived most of their lives in tents, some quite large, that were lavishly furnished. They traded horses and furs for grain, weapons, and luxuries such as Chinese silk.

See also: India.

FURTHER READING

Grousset, Rene. *The Empire of the Steppes: A History of Central Asia*. New Brunswick, NJ: Rutgers University Press, 1988.

Thompson, E.A. *The Huns*. Cambridge, MA: Blackwell, 1999.

India

A country that is a critical center in the development of Asian civilization, India has served as a cultural innovator, a recipient of external culture, and the source of cultural inspiration for other countries of the region and the world.

Before C.E. 1500, a series of invasions and migrations by **seminomadic** outsiders from central Asia and neighboring Persia into the Indian subcontinent played a significant role in laying the foundation of modern Indian society. By 1500, these **indigenous** and foreign groups had intermixed to produce an Indian society characterized by wide regional variation in ethnic, cultural, and linguistic traditions.

Geographical and climatic differences between northern India and the remainder of the subcontinent influenced India's early history. Northern India's broad river plains, drained by the Indus, Ganges, and Brahmaputra rivers, supported the concentrated settlement of farming populations, who provided a stable economic base to sustain India's early empires, the Mauryans (ca. 400–180

MILESTONES IN ANCIENT INDIAN HISTORY

CA. 2500–1800 B.C.E. Early urban centers arise in Indus Valley

CA. 1600 B.C.E. Seminomadic Aryans from southern Russia migrate to India and impose authority over existing populations

CA. 1600–600 B.C.E. Mixing of Aryan and Indian cultures produces foundations of Hindu religious beliefs and caste system of social stratification

CA. 600 B.C.E. Regional kingdoms begin to emerge in northern India's Ganges River plain

CA. 400–180 B.C.E. Mauryan regional clan conquers its competitors to establish rule over India

326 B.C.E. Macedonian king Alexander III, the Great, invades Pakistan and western India; his survivors establish Indo-Greek states in the northwest region

CA. 273–232 B.C.E. Mauryan Empire reaches it height under Asoka, who adopts Buddhism as the favored religious tradition of the state

CA. 180 B.C.E.–C.E. 320 Mauryan Empire collapses; India enters prolonged period of division and rule by competing regional kingdoms

CA. C.E. 320–550 Gupta kings establish control over north Indian Empire and adopt Hinduism as state religious tradition; Gupta rule considered the "classical age" of ancient Indian culture

C.E. 550–606 Repeated invasion attempts by seminomadic Huns leads to fall of Gupta empire and period of political disorder

C.E. 606–647 Military leader Harsa briefly reestablishes central authority in India

C.E. 647–1010 North India reverts to period of regional rule by states controlled by military leaders; now south Indian states emerge

C.E. 1010–1206 India comes under the rule of a series of early Muslim rulers

C.E. 1206 First dynasty of the powerful Delhi Sultanate established by Qutb-ud-din Aibak

C.E. 1206–1290 Slave dynasty, successors of Qutb-ud-din Aibak, rules India

C.E. 1290–1320 Reign of the Khilji Turks

C.E. 1320–1413 Reign of the Tughlaq Turks

C.E. 1336–1565 Powerful Vijayanagara Hindu military monarchy in south India

C.E. 1414–1451 Reign of the Sayyid Turks

C.E. 1451–1526 Reign of the Lodi Turks

C.E. 1526 Afghan leader Babur overthrows the Delhi Sultanate and establishes Mughal dynasty (1526–1857)

B.C.E.) and the Guptas (ca. C.E. 320–550). The rivers fostered economic and social exchanges, ensuring a more or less common culture among those who lived within the river system.

ARYANS, VEDICS, AND MAURYANS

Around 1600 B.C.E., migrating seminomadic Aryans from southern Russia's steppe grasslands entered India through the Hindu Kush mountain passes. They imposed their authority over India's settled agriculturalists, the remnants of a networked urbanized society in northwestern India's Indus Valley (2500–1800 B.C.E.). During the next 1,200 years, the **nomads** mixed with India's indigenous peoples, as settled agricultural society gradually spread from west to east in the Ganges River plain of northern India.

Linguistically, the Aryan's **Sanskrit** language displaced the previous use of Dravidian languages in northern India, but preexisting Dravidian cultures remained in widespread use in southern India. Religiously, Aryan worship of male **celestial** divinities mixed with local worship of female fertility deities; these female divinities became the wives and female companions of the Aryan gods. The cultural mix of Aryan culture with local culture, a process called Sanskritization, also resulted in the Aryan religion's inclusion of assorted local **animistic** spirits: ancestors, animals (cattle, birds, snakes), and various natural forces (wind, water, fire). The end product was the variety of divine beings that are still worshiped as the diverse personalities, incarnations, and subordinate deities of Visnu, Siva, and the Buddha.

Socially, the mixing of populations resulted in the Indian caste system, which developed from the **hierarchical** ordering of Aryan society. Priests and religious teachers were *Brahmins;* kings and their elite warriors were *Ksatriya;* commercial specialists, landholding elite, those who controlled livestock were *Vaisya;* and the supportive worker/laborers were *Sudra*.

By about 600 B.C.E., regional kingdoms began to emerge in northern India's Ganges River plain. These were dominated by landholding family clans that had appropriated the new mixed culture. By 400 B.C.E., the Mauryan clan had conquered its competitors, ruling from the urban center they called Pataliputra (present-day Patna). Their realm was located in the strategic central Ganges River plain, where its rulers could control communication networks throughout the subcontinent.

Mauryan India reached its peak under the emperor Asoka (r. ca. 273–232 B.C.E.), a great military conqueror and social innovator. Asoka initially fought against the regions bordering his realm, notably in 265–264 B.C.E. against the Kalinga realm on India's eastern coast, south of the Ganges River mouth. He **annexed** Kalinga after what his **inscriptions** estimate to be 100,000 Kalinga deaths, then resettled Kalinga's remaining populations in his territorial core. Asoka's inscriptions indicate that he converted to Buddhism shortly after his victory, and that he successfully promoted the faith's socially inclusive religious **doctrines**. Buddhism was more tolerant of social diversity than was the rigid caste-based order advocated in the *Dharmasastra* texts, and allowed Asoka to culturally unite the diverse populations that were now included in his vast domain.

During his reign, Asoka supported the development of Mauryan cities and promoted trade, implemented a universal law code and a realmwide judicial system, and initiated a partnership with the Buddhist church. Asoka sent Buddhist monks as his personal agents throughout north India, to minister to local populations while tending to the state's business. Monks also served as his international envoys to neighboring realms. Asoka was widely idealized throughout Asia following his death as the *cakravartin,* the universal **monarch** whose personal achievements and high ethical standards were the model for other kings.

NEW INVASIONS, THE GUPTAS, AND THE DELHI SULTANATE

After the Mauryan Empire split into regional kingdoms around 180 B.C.E., India was subject to new invasion attempts, migrations, and cultural infusions from the northwest until C.E. 320. This **era** resulted in the mixture of newly arrived and existing cultures on its modern-day Pakistan frontier. Among those who had an impact were the remnants of the armies of Alexander III, the Great, collectively called the Indo-Greeks (180 B.C.E.–C.E. 10). They had remained behind as rulers of Greek colonies on India's northwestern frontier after Alexander's 326 B.C.E. victory against Mauryan forces in what is now Pakistan. The Indo-Greeks initially competed for influence with the central Asia–based Scythians, then with the Iran-based Parthians to the first century C.E., and later with the Afghanistan-based Kushana, who held parts of the northern Ganges River plain from C.E. 105–250.

During this transitional era, Greek and Persian religious and artistic heritage influenced India's evolving Buddhist and Hindu traditions. This was especially the case as Greek tradition reinforced local adoption and adaptation of **icon** worship, evident in the earliest statuary representations of the Buddha in India's Gandharan art. It portrays the Buddha in Greek dress and with Greek physique, featuring long, dark hair and a mustache.

The origins of the Gupta Empire (ca. C.E. 320–550) are vague, although **historical research** suggests that the Gupta kings originated in the Bengal region. They established their empire by conquering the old Magadha political center of the Mauryan kings in the central Ganges River plain region. The Gupta kings, who claimed to be the heirs to the Mauryans, restored centralized authority, once again centered at the Mauryan capital city of Pataliputra.

Marking a break with the ultimately failed Mauryan past, Gupta kings patronized Hinduism. By the early fourth century C.E., Hinduism had developed as an inclusive mix of traditional Brahmanical ritual and scholarship and popular devotional worship of Hindu divinities. Gupta India is considered India's classical age, marked by its rulers' patronage of Hinduism and its religious and literary accomplishments. The Gupta age witnessed the composition of the highest quality Sanskrit language poetry, literature, drama, and religious texts.

Gupta rule ended around C.E. 550, as a result of the more than 100-year drain of public resources for the defense of India's northwestern frontier against the repeated invasion attempts by seminomadic eastern Huns. There was a brief renewal of centralized authority under the military leader Harsa in the early seventh century (r. C.E. 606–647). Harsa claimed that he had restored the Gupta realm, but his was a military rather than a civilian administration. After his death, north India once again lapsed into regional states dominated by similar martial kings or chiefs.

At the turn of the millennium, north India faced a new onslaught from the northwest by Muslim invaders. Most of these were Turks from central Asia who entered India via India's northwestern passageways. Between 1010 and 1525, a series of Muslim dynasties rose and fell. In 1206, the Ghurid warrior Qutb-ud-din Aibak (r. 1206–1210) took Delhi and founded the first of several dynasties known as the Dehli Sultanate. Qutb-ud-din Aibak's successors, collectively known as the Slave **dynasty**, reigned from 1206 to 1290. In turn, the Khilji Turks reigned from 1290 to 1320, followed by the Tughlaq (1320–1413), the Sayyid (1414–1451), and the Lodi Turkish rulers (1451–1526). Finally, in 1526, the Afghanistan-based Babur, an Afghan heir to the Mongols, defeated the Lodi armies and initiated the Mughal dynasty (1526–1857).

Some scholars characterize the Delhi Sultanate as a succession of Turkish dynasties that ruled over largely Hindu subject populations in northern India, exacting taxes in return for protection. Despite this seeming separation between ruler and ruled, Muslims and Hindus began a productive intercultural dialogue typical of the earlier eras of cultural integration. The key difference is that the Muslim rulers allowed Hindus greater opportunity to retain their cultural traditions, as long as they submitted to Islamic sovereignty.

See also: Archeological Discoveries; Buddhism; Hinduism; Huns; Islam to Asia, Spread of; Monsoons; Society.

FURTHER READING

Basham, A.L. *The WonderThat Was India*. New York: Grove Press, 1959.

Keay, John. *India: A History*. New York: Grove Press, 2000.

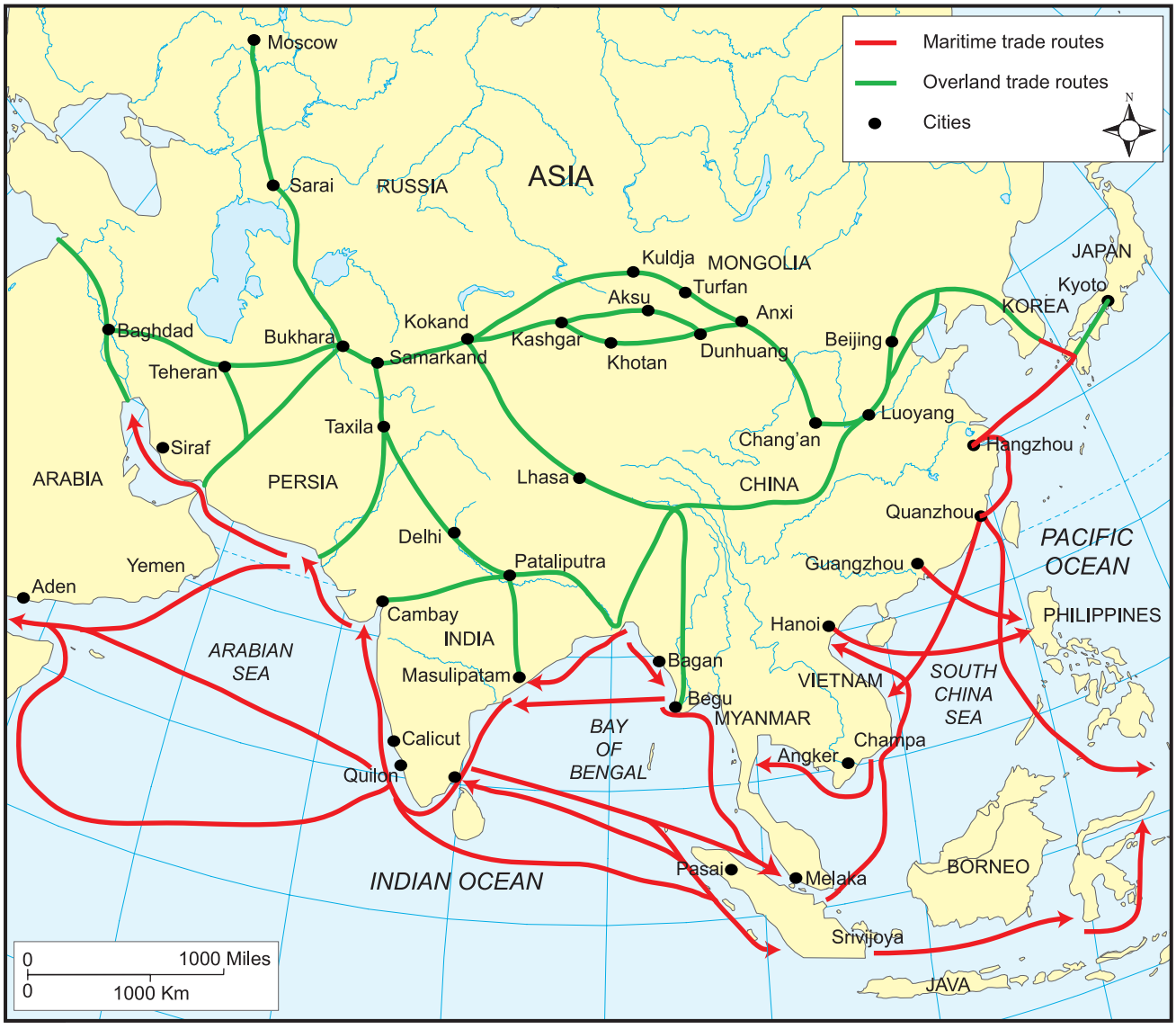
Wolpert, Stanley. *A New History of India*. New York: Oxford University Press, 2005.

Indian Ocean Trade

Commercial contact that linked the cultures along the coast of **maritime** Asia (India, Southeast Asia, China, Korea, and Japan) long before the arrival of Europeans in the middle of the second millennium C.E. By the first century B.C.E., the peoples and cultures of the Indian Ocean and the adjacent regions to its east were linked in a trade network that extended from the port cities of the eastern coast of the African continent all the way to Japan and Korea.

INTERNATIONAL TRADE ROUTES OF THE PEOPLES OF ASIA, CA. C.E. 1500

The multiethnic trade centers of Southeast Asia and the coastal regions of China, Korea, and Japan functioned as part of a great integrated trade network rooted in the Indian Ocean. The alternative east-west overland route was known as the Silk Road, which connected China to northern India, Persia, and the Arab capital at Baghdad.



Initially, the greatest volume of maritime trade took place between the Middle East and India, as China's trade with the West depended more on the overland Silk Road until the early third century C.E. Maritime traders brought India's pepper, cotton **textiles**, and bronze statuary as far west as the Roman Empire. Indian statuary was even made to the specifications of Roman consumers. Exotic products from Southeast Asia and China, such as silk, incense, and spices, also made their way to Rome and other locations in the West.

China's earliest interactions with India intensified after the fall of the Han **dynasty** (206 B.C.E.–C.E. 220). At this time the China's elites, many of whom had relocated to southern China to avoid the chaos of the north, sought an alternative trade route to the West after the collapse of the Han dynasty rendered the central Asian Silk Road unsafe. They

also sought to gain direct access to the homeland of Buddhism as the source of religious texts, religious **artifacts**, and ritual objects, and as a pilgrimage center where Chinese monks could study at the foremost centers of Buddhist scholarship. Later Tang (C.E. 618–907) and Song (C.E. 960–1279) governments took greater interest in commercial rather than religious exchanges with the regions to China's south. This interest stemmed from periodic insecurities along the old Silk Road across central Asia. Unsafe traveling conditions resulted in regular market shortages that left Chinese merchants unable to satisfy the **aristocracy**'s continuing demand for Western products.

The eleventh century witnessed a surge in the volume of Indian Ocean trade, thanks largely to the regional stability established over the Middle East by Muslim Abbasid caliphs (until 1258) and Seljuk Turks (1037–1219). Middle Eastern merchants flooded the Indian Ocean, seeking Asian goods in exchange for their own. This, combined with a stable China market, resulted in southern India and Sri Lanka becoming new international commercial hubs, filling roles as strategic intermediaries in the trade between the Middle East and Southeast Asia. In Southeast Asia, Java became prominent because of its central role in providing international access to the spices of the eastern Indonesia **archipelago**, then known as the Spice Islands.

By this time, regional centers began to function as part of one great, integrated Indian Ocean trade network. The increased volume of trade attracted a multiethnic community of trade specialists that included assorted Middle Easterners, Indians, Southeast Asians, and Chinese. All the sojourning traders made seasonal voyages using the Asian monsoon winds, which blew from southeast to northwest in June through August and then reversed, blowing from northwest to southeast in December through March.

Rather than navigate the entire length of the trade route, which might take two to three years, merchants specialized in shorter voyages in one segment, sailing to and from an adjacent region in a single year. Traders would sell their goods to local intermediaries at their destination ports, who would then hold and resell them to merchants arriving later from other regional markets. For example, local intermediaries traded Middle Eastern glassware and Indian cotton textiles supplied by southern Asia–based seafarers for ceramics, silk, and spices brought by Chinese and Southeast Asian merchants.

In the early fifteenth century C.E., the new Ming emperors, who had come to power in China in 1368, sent the eunuch admiral Zheng He and his fleet of Chinese battleships to assert China's interests across the entire maritime network (1405–1433). Zheng He eliminated pirates and promised military assistance and continued Chinese support for local political regimes that guaranteed the regular flow of international products to China's ports. He also reinstated the Chinese tributary trade system, wherein Indian Ocean countries sent periodic embassies to China's courts to present diplomatic "gifts" of their prize marketplace commodities. In return, the Chinese emperor bestowed honorific material symbols and official proclamations that confirmed the local rulers' authority. Partly in response to these Ming initiatives, the fifteenth century in Asia witnessed substantial increases in trade volume, participants, and the diversity of traded commodities. This prosperity attracted the attention of Europeans, whose desire to acquire Asia's exotic commodities resulted in Europe's sixteenth century "Age of Discovery."

See also: Buddhism; China; Java; Melaka; Monsoons; Silk Road; Spice Trade; Zheng He.

FURTHER READING

Abu-Lughod, Janet. *Before European Hegemony: The World System 1250–1350*. New York: Oxford University Press, 1991.

Sen, Tansen. *Buddhism, Diplomacy, and Trade: The Realignment of Sino-Indian Relations, 600–1400*. Honolulu: University of Hawaii Press, 2003.

Islam, Spread of

The introduction of Islamic religion and culture from the Middle East, which profoundly affected the development of Asian civilizations from the eleventh to the sixteenth centuries C.E. While military conquest brought Islam to India, trade spread the faith throughout the rest of Asia.

Asian merchants and rulers initially adopted Islam because of the commercial advantage it brought in dealing with Muslim traders. Only later did Asian rulers oblige their subjects to convert to Islam. In some states, Islamic law and ritual also validated a society's break with a discredited Hindu or Buddhist past. Islam also served to legitimize and unify new states arising among tribal societies, such as the Mongols, which had no prior tradition of central authority.

CONVERSIONS

The initial Asian conversions to Islam took place following the Umayyad Arab conquest of Persia in C.E. 651, after which most Persians converted from Zoroastrianism to Islam. Persian merchants and missionaries traveling the central Asian Silk Road trade route through Afghanistan found resident Turkish tribesmen receptive to the new faith, in part because of the political and economic advantages that conversion provided relative to their Islamic neighbors: politically, those who shared the Islamic faith were likely to negotiate and form alliances rather than wage war on each other, and to offer a mutual defense against non-Muslims, and Islamic law forbade those who shared in the faith from taking advantage of a fellow Muslim in economic transactions, which was reassuring to long-distance sojourners trading with strangers. By 661, the central Asian caravan hub of Samarkand was already a noted center of Islamic scholarship, and soon other Islamic retreats appeared at major stopovers on the overland trade route between the Islamic Middle East and China.

Multiethnic Muslim traders first reached China during the Tang **dynasty** (C.E. 618–907), arriving either by the overland Silk Road or the Indian Ocean **maritime** route. They established small residential communities in major Chinese cities throughout the Tang and Song (C.E. 960–1279) dynasties. They became especially prominent under the Mongol Yuan dynasty (C.E. 1279–1368), although Yuan Muslims remained a small percentage of China's overall population. While the Yuan officially supported the Buddhist religion, their ruling elite included many Muslims with central Asian and Middle Eastern roots.

In the early fourteenth century, factions of the Mongol alliance based in central Asia established an **autonomous** Islamic confederacy known as the Golden Horde. The Golden Horde's conversion to Islam reinforced its independence from other Mongol tribes and established the foundation for an alliance with the Mamluk Turks, who bordered the Horde to the southwest.

As in China and India, small numbers of urban-based Southeast Asian rulers, elite, and commercial specialists converted to Islam. Local populations were slower to accept Islam because of their strong traditional loyalties to Hinduism, Buddhism, and local **animistic** faiths. Although Muslim traders from the Middle East, southern Asia, and China traded actively in Southeast Asia by the eighth century C.E., the first Southeast Asian coastal state to convert to Islam was Samudra-Pasai in northeastern Sumatra, in 1267. Brunei in northeastern Borneo followed suit in 1365, as did Melaka on the southwestern Malay Peninsula (1415) and Demak in northwestern Java (1475). In each of these port-states, Muslim rulers reigned over non-Muslim societies, and likely converted to Islam to encourage sojourning Muslim traders to transact their business in their port of trade rather than in that of a non-Muslim competi-

tor. However, conversion may have also been due to genuine commitment.

In the early eleventh century, meanwhile, Muslim tribesmen from the central Asian steppes invaded India and established Islamic rule there; in 1206, Qutb-ud-din Aibak founded the first dynasty of the Delhi Sultanate, which lasted, under successive Islamic dynasties, until 1526. This succession of Turkish dynasties ruled over largely Hindu subject populations in northern India from massive walled fortresses. Both Muslim and Hindu communities in India adapted the Islamic artistic traditions of Persia, most notably in the development of "Persian miniature" religious and **secular** art.

CULTURAL CHANGE

There is no single Asian Islamic tradition. Throughout the continent, Islamic thought, practice, and ritual adapted to local circumstances and cultures. Asian Islamic societies did not develop in isolation, however, as Asia-based clerics regularly participated in the theological debates among leading Islamic scholars in Mecca and other major religious centers of the Middle East. Initially, conversion to Islam may have been a token gesture undertaken for economic, political, or social benefit. In addition to the noted ruling elite, the other major initial conversions took place among people of previously low social stature, who viewed their conversion to be a means to enhance their opportunities for personal gain.

The earliest Islamic scholars who traveled to central Asia, India, and Southeast Asia found the mystical traditions of Islam especially compatible with existing religious values, and thus promoted a modified version of Islam known as Sufism. The Sufi tradition blended Islamic and local values to win converts, rather than promote the more legalistic versions of Islam (Sunni and Shi'a). In Java, for example, the form of Islam that took root placed less emphasis on Islamic **doctrine**, but instead stressed the role of divinely empowered saints who allied with Java's new Islamic sovereigns to unite the natural and supernatural worlds. Java's Islam focused on rulers and clerics performing magical court-based Islamic ritual. Local converts retained their most valued societal practices and continued their worship of traditional spirits, which they believed were subordinate to the supreme Islamic divine being, Allah.

The Islamic dietary restrictions against eating pork were especially troubling in China and Southeast Asia, where pork was a dietary **staple**. In southern Asia and China, Muslim cultural practices regarding women reinforced preexisting limitations on women's activities outside the home—and went even further by suggesting that women should be veiled as well as secluded. Islamic doctrine was used to legitimize the subordination of women, to assert that a woman's primary duty was to marry and raise children (especially boys), and to assert that a woman's principal spiritual duty was subservience to her husband. At the same time, however, Islam brought a new emphasis on the equality of all before God, which had previously been advocated by Buddhists and in Hinduism's bhakti tradition. Islam's orthodox restrictions were not usually applied in Southeast Asia, where women regularly participated in the marketplace.

Moreover, the influence of Islam in Asia to the sixteenth century remained uneven. Northern India's majority Hindu population was subject to the authority of the Delhi Sultanate ruling elite. Central Asia's steppe populations had widely converted to forms of Islam that allowed them to retain most of their previous cultural practices. China had small Muslim communities that were largely composed of Islamic merchants and **artisans** who lived in most of its major urban centers. Southeast Asia had several conversions among elite members of its most prominent maritime trade centers, but as yet Islam had few nonelite followers there. Nevertheless, Islam was having a cultural impact on Asia, including the rise of new Islamic states, the importance of Islamic law as it reinforced Asian trade, and local interest in Islam as a new **monotheistic** alternative to the existing Asian religious faiths.

See also: Golden Horde; India; Java; Religion; Silk Road; Spice Trade.

FURTHER READING

Eaton, Richard M., ed. *India's Islamic Tradition, 711–1750*. New Delhi: Oxford University Press, 2003.

Hildinger, Erik. *Warriors of the Steppe: A Military History of Central Asia 500 B.C. to A.D. 1700*. New York: DaCapo Press, 2001.

Ricklefs, M.C. *Mystic Synthesis in Java: A History of Islamization from the Fourteenth to the Early Nineteenth Centuries*. Norwalk, CT: EastBridge Press, 2006.

Japan

East Asian island nation that evolved from a primitive hunting-and-gathering culture into a regional political and economic power between 1000 B.C.E. and C.E 1500. Japan's earliest history was influenced by extensive trade and cultural interactions with Korea, which was Japan's point of contact with the more advanced civilization in China.

YAYOI CIVILIZATION

Diverse and widely dispersed Japanese hunting, gathering, and fishing societies are collectively referred to as Jomon culture. Named for their distinctive cord-marked pottery, these societies date from roughly 10,000 B.C.E. to 300 B.C.E. The Yayoi period (300 B.C.E.–ca. C.E. 300), named for the town near modern-day Tokyo where **archeologists** first discovered distinctive pottery of that **era**, witnessed the introduction of Korean *sawah* (wet rice), bronze, and iron cultures into Japan. During the Kofun period (ca. C.E. 300–538), elite tribal clans, known as *uji,* achieved dominance over rural rice-cultivating peasants. The period is named for distinctive keyhole-shaped raised Kofun tombs, some as large as 440 yards (400 m) in length, located on the eastern Kinai plain on the Japanese island of Honshu, between the modern-day cities of Osaka and Nagoya.

The uji clans legitimized their supremacy by claiming that they were the sole intermediaries between humans and powerful spirits known as *kami*. The Shinto religion, which evolved during this time, ascribed great power to the kami, which included the spirits of departed relatives and divine spirits that animated natural forces. The uji claimed that only they could influence these spiritual forces to protect their communities. By about C.E. 400, the Yamato clan, centered in the region surrounding the modern city of Nara, forged a network among local uji clans through a combination of conquest, absorption, and incorporation of clan heads as government ministers. The ruling Yamato clan subordinated the other uji and claimed ultimate authority based on its direct descent from the sun goddess Amaterasu. Early Japanese emperors served as supreme priests, who recognized and ranked the local shrines that were subordinate to the imperial shrine.

Following a war over imperial succession in 587, the Soga uji clan took over the day-to-day affairs of the early state. The Yamato emperors became figureheads who spent most of their time performing state Shinto rituals, while the uji clans were assigned specific tasks in the new imperial administration, for example, revenue management, rituals, and warfare.

YAMATO JAPAN

Prince Shotoku (r. C.E. 593–621) promoted the spread of Buddhism in Japan as a superior new magic that was successful in contemporary China. During the period and following, the Chinese Sui (C.E. 581–618) and Tang (C.E. 618–907) courts were blending Buddhism with the Confucian tradition. They successfully reconstructed their Chinese state, which had not had an emperor since the fall of the Han **dynasty** in C.E. 220.

Shotoku felt that Buddhism played a key role in the renewed Chinese Confucian social order that promoted the centralization of political power. With Shotoku's encouragement, clan leaders in Japan competed with one another to erect lavish local

MILESTONES IN ANCIENT JAPANESE HISTORY

CA. 10,000–300 B.C.E. Early hunting-and-gathering culture known as Jomon inhabits Japan

CA. 300 B.C.E.–C.E. 300 Yayoi culture marks transition to settled agriculture in Japan

CA. C.E. 300–538 Kofun period; elite tribal clans achieve dominance over rural rice-cultivating peasants; Shinto religion originates during this time; named after the mound-shaped tombs that were built for the elite class at this time

CA. C.E. 400 Yamato clan establishes authority over rival clans and forms first Japanese empire

C.E. 593–621 Reign of Prince Shotoku, who promotes spread of Buddhism in Japan

C.E. 645 Regional clans revolt, establish new imperial authority under the Fujiwara family

C.E. 710 Nara is declared permanent imperial capital, breaking the tradition of moving the capital upon the death of the emperor

C.E. 710–784 Nara-era court patronizes Buddhism, whose growing influence over the state becomes a concern for many Japanese

C.E. 784 Capital moved to Kyoto to distance government from influence of Nara-based Buddhist sects

C.E. 794–1185 Kyoto imperial era; imperial government becomes increasingly isolated from affairs in the countryside, leading to rise of local military leaders known as *shoguns*

C.E. 1185–1333 Kamakura Shogunate wields ultimate power; exercises authority through regional *samurai,* or warrior lords

C.E. 1274 AND 1281 Mongol invasions twice thwarted due to unexpected typhoons, which were dubbed *kamikaze,* or "divine wind," by the Japanese

C.E. 1338–1467 Ashikaga Shogunate fuses Japanese imperial court traditions with samurai culture, fostering notable achievements in art, architecture, drama, and literature

C.E. 1467–1568 Era of civil wars between competing samurai armies

C.E. 1603–1868 Tokugawa Shogunate restores central authority; retrains samurai warriors as scholar-bureaucrats; Japan becomes international political power and develops new urbanized culture under Tokugawa rule

shrines dedicated to the main Buddhist sects, whose central temple complexes in Japan were located in the imperial capital at Nara. Nara temples served as centers from which the competing sects spread their influence among the clans.

The uji families retained a large measure of power under Yamato rule by negotiating a partnership with the emperor and the Buddhist clergy to oversee various aspects of the state's ritual, military, and administrative affairs. The foundation for this new order was the "Seventeen Article Constitution" issued by Prince Shotoku in C.E. 604. This document, which promoted a mixture of Buddhism, Confucianism, and the Chinese model, replaced traditional **hereditary** ranks with new Chinese-style designations of senior, junior, upper, and lower grades. Buddhist priests and uji elite accepted their proper place in the new Yamato political and religious order.

In C.E. 645, the succession of a new emperor coincided with a revolt staged by several powerful uji clans. The uprising was led by the Nakatomi clan head Kamatari, who subsequently established a partnership with the new emperor, Tenchi. As the

head of the retitled Fujiwara family, Kamatari implemented the new Taika ("great change"), reforms that were intended to eliminate what remained of Japan's old decentralized government. He also established a new capital at Naniwa (now within the modern city of Osaka), which was modeled on the contemporary Tang capital at Changan, now called Xian. The Taiho Code (710), issued by Kamatari's Fujiwara successors, further codified the new Japanese political order, formalizing the Yamato state structure that had emerged gradually over the previous century.

IMPERIAL RULE IN NARA AND KYOTO

Nara became the new imperial capital in C.E. 710 following the death of the emperor Tenchi. Prior to this time, the Yamato court moved whenever an emperor died to avoid ritual pollution associated with the deceased ruler. This once-common practice was abolished under the new Taiho Code, which proclaimed that Nara was to become the permanent capital.

Nara was the site of the realm's greatest Buddhist temples, such as the stunning Todaiji Eastern Great Temple and its Great Statue of the Buddha. The monks of six Nara-based sects competed for the patronage of the emperor and his elite but too often took this competition into the streets of Nara, where they regularly fought with one another. The revelation of a romantic affair between a Buddhist priest and an empress in the C.E. 750s reinforced public fears that Buddhism had become a threat to the civil order. When the priest and the empress attempted to overthrow the Fujiwara family, the imperial military intervened to occupy the Nara temples and to place the Nara priests under "house arrest." With the death of the empress, the new emperor Kammu (r. C.E. 781–806) and his Fujiwara advisers decided in C.E. 784 to move the Japanese capital out of Nara, leaving behind the tarnished reputation of the Nara-era court and the once-powerful Nara-based Buddhist sects. Nagaokakyo served as the capital for 10 years before the court relocated to Heian (modern Kyoto) in 794.

During the Kyoto imperial era (C.E. 794–1185), only two Kyoto-based Buddhist sects were officially recognized, and women were no longer allowed to hold the imperial throne. Kyoto imperial authority reached its height in the tenth century C.E., when the Fujiwara clan exclusively managed the affairs of the court on the emperor's behalf. Under the Fujiwara, which continued to dominate imperial government until C.E. 1160, the court became more and more insulated from the affairs of the countryside, which finally slipped from the direct authority of the court.

The decentralization of Japanese political authority was based in the *shoen,* or regional estates of the court elite. Lay officials managed the estates, which were intended to finance the needs of the court **aristocracy** as well as maintain order in the countryside. Military authority also decentralized to professional warriors called *samurai,* who formed military regiments led by a *shogun* ("military guardian against barbarian peoples"). The samurai protected Japan's core agricultural region from the periodic attacks of bandits who lived on the frontier. When the court finally collapsed in 1185, local civic officials, religious orders, large landowners, and Buddhist temples became the new centers of Japanese authority. They partnered with a new warrior elite, confirming the reordering of Japanese society that had emerged over the past century.

THE KAMAKURA AND ASHIKAGA SHOGUNATES

After C.E. 1185, a series of shoguns wielded ultimate political authority in Japan. The shogun received his authority from the emperor after winning battles against armed opponents. In theory, the emperor delegated to the shogun responsibility for running the Japanese imperial state. In practice, the local "stewards" (*jito*) and "constables" (*shugo*) who had managed the **aristocratic** estates during the imperial period assumed the day-to-day affairs of what remained of the Japanese state. The now-hereditary samurai military elite, ultimately bound by service contracts to the shogun, imposed local order.

The shogunate system depended on the shogun's willingness to acknowledge the local territorial rights of the samurai lords. For example, under

TURNING POINT

The Divine Wind

The *kamikaze,* or "divine wind," is in recent times associated with Japanese pilots who flew suicide missions against American ships during World War II. The name, which refers to two of the most significant events in ancient Japanese history, represented to the Japanese the possibility of victory even in the darkest hour of impending defeat. The roots of the expression lie in the attempted Mongol invasions of Japan during the thirteenth century.

In C.E. 1266, Kublai Khan (ca. C.E. 1215–1294), ruler of the Mongol Empire, demanded Japan's submission to his newly established Yuan court. When Japan's Kamakura Shogunate (C.E. 1185–1333) refused, Kublai Khan launched an invasion force of 30,000 Mongol and Korean warriors. In 1274, the Yuan army landed on the west coast of the island of Kyushu at Hakata (modern-day Fukuoka). The Yuan military not only outnumbered the Japanese samurai, but also possessed superior tactics and weapons. However, severe weather wrecked many of the invading Chinese ships and threatened to isolate the Yuan troops from their supply lines. The Mongols ultimately were forced to retreat to southern Korea.

Seven years later, Kublai invaded Japan again, this time with a force of 140,000 Mongols, Chinese, and Koreans, carried in the largest fleet of ships ever assembled. Since the last attack, however, the Japanese had built a stone wall along the shoreline at the Mongol landing site at Hakata. They had also retrained their forces to fight in the group style of the Mongols rather than in the individual combat favored by the samurai. The Japanese defenders kept the Mongols contained on a narrow beachhead, while Japanese boats successfully raided the Chinese supply ships. Two months after the landing a typhoon struck, destroying most of the Chinese fleet and forcing the remainder of the Mongol forces to withdraw in defeat.

To the Japanese, this "divine wind" was no accident. It confirmed the Japanese belief that they were favored by the gods, who would always protect Japan against any outside threat. Interior threats, however, were another matter. Despite the Japanese victory, the Mongol war had bankrupted the Kamakura Shogunate, which subsequently fell to the Ashikaga shoguns (C.E. 1338–1467).

the Kamakura Shogunate (C.E. 1185–1333), regional samurai lords were submissive to the Kamakura shoguns, but were also allowed to maintain their own armies. The Kamakura Shogunate, based in Kamakura, southeast of modern Tokyo, was notable for its successful institution of the decentralized shogunate system. Under this system, educated samurai became hereditary administrators who managed the affairs of the Kamakura court. They served as a key source of contact between the shogun and his regional subordinates.

The Kamakura shoguns repelled Mongol invasions of Japan in 1274 and 1281, with considerable help from the *kamikaze* ("divine winds"), or severe typhoons that destroyed the invading Mongol fleets. However, the expense of maintaining a strong defense against potential Mongol invasions undermined the Kamakura Shogunate. After defeating the Kamakura clan in C.E. 1338, the Kyoto-based Ashikaga Shogunate (C.E. 1338–1467) took power.

The Ashikaga era was marked by further decentralization of authority, but is especially noteworthy for its fusion of imperial court traditions with samurai culture. Japanese artists made notable achievements in landscaping and gardening, the evolution of the tea ceremony (and teahouses), Noh drama (marked by the performers' attempts to strictly control their expressions), and new forms of samurai-inspired literature. The Ashikaga era ended with a century of civil wars (C.E. 1467–1568) among rival samurai armies loyal to regional *daimyo* warlords intent on consolidating power.

Japanese religious practice often blends elements of Buddhism, Shinto, and traditional animistic beliefs. Each of the five levels in the Tosho-gu Shrine on Japan's Honshu Island (shown here) represents a different element of the natural world. (Demetrio Carrasco/Dorling Kindersley/Getty Images)

The new Tokugawa Shogunate (C.E. 1603–1868) that emerged from the wars restored the strong central authority that had eroded since the fall of the imperial court in C.E. 1185. It accomplished this reunification by retraining the hereditary samurai warriors to become educated scholar-bureaucrats, based in a network of new urban administrative and commercial centers. This successful transformation from a decentralized military order to a recentralized political, economic, and social system was the foundation for the rapid transformation of Japan into an international power in the late nineteenth century.

See also: Archeological Discoveries; Buddhism; Confucianism; Culture and Traditions; Language and Writing; Myths and Epics; Shinto; Society.

FURTHER READING

Brown, Delmer, John W. Hall, and Kozo Yamamura, eds. *The Cambridge History of Japan*. Vols. 1–3. Cambridge: Cambridge University Press, 1992–1999.

Duus, Peter. *Feudalism in Japan*. New York: McGraw Hill, 1993.

Schirokauer, Conrad, David Lurie, and Suzanne Gay. *A Brief History of Japanese Civilization*. Boston: Wadsworth, 2005.

Java

Island in what is now Indonesia that served as the center of **maritime** Southeast Asian cultural development starting in the fifth century C.E. Among Java's cultural **artifacts** are some of Asia's most impressive Hindu and Buddhist temples, which date from C.E. 600 to 1500.

EARLY BUDDHIST AND HINDU CIVILIZATION

Sanjaya (r. ca. C.E. 732–760), a **patron** of the Hindu god Siva, was the first significant Javanese **monarch**. He built his court and the first of Java's sprawling temple complexes on the sacred Dieng Plateau in northern central Java. Sanjaya was succeeded by a series of Sailendra monarchs (ca. C.E. 760–860), who followed his lead and built several major Mahayana Buddhist temples in central Java near modern-day Yogyakarta. These efforts culminated in the early ninth century with the Borobudur temple complex on the western edge of the Kedu Plain.

In the late ninth century, central Java–based Hindu kings defeated the Buddhist Sailendras and proclaimed their sovereignty over what they called the Mataram state (ca. C.E. 860–1000). These kings constructed their own impressive central temple complex dedicated to Lord Siva at Prambanan, north of Yogyakarta, near the volcanic Mount Merapi.

A devastating eruption of Mount Merapi in the tenth century temporarily made the central Java plains uninhabitable. This shifted the center of Javanese civilization east to the basins of the Brantas and Solo rivers. For a time, temples assumed less importance as statements of royal authority. Instead, kings through the reign of Airlangga (r. ca. C.E. 1016–1045) encouraged the spread of wet-rice agriculture in eastern Java, initiating the construction of new water management projects and mountainside wet-rice terraces to support the development of new village societies. The move to the east also allowed Javanese monarchs to exploit a strategic position adjacent to the international maritime trade route to eastern Indonesia's Spice Islands.

The Javanese **monarchy** split into competing factions following Airlangga's death, with kings identified by their association with two rival courts. One regional **dynasty** ruled from Kediri on the southwestern edge of the eastern Java river plain, and the other at Singosari to the southeast on the Malang Plateau.

MAJAPAHIT JAVA AND THE TRANSITION TO ISLAM

The Majapahit state (C.E. 1293–1528), based on the edge of the Brantas River delta west of present-day Surabaya, was the high point in the development of the Hindu-Buddhist civilization in the islands of Southeast Asia. Its kings came to possess a degree of direct administrative control over their subordinate regions in eastern Java that went beyond that of previous courts. They also established authority over the remainder of Java and claimed an overseas empire that included all of the islands that are now part of modern Indonesia, which they called Nusantara.

Local societies appropriated Majapahit's refined culture. The most notable of these was neighboring Bali, which still practices the Hindu religious traditions it inherited from Majapahit. Although the other eastern Indonesian **archipelago** islands did eventually convert to Islam, their ritual practices

were still heavily mixed with a continuing worship of local spiritual forces, and their material culture (their dress, food, and court traditions) derived from those of Majapahit-**era** Java.

During the fifteenth century, Majapahit faced aggressive competition from the newly Islamic ports on Java's northern coast. In 1528, the court finally fell to a military coalition among these Islamic ports led by the Demak port-states. Thereafter, the Javanese gradually converted to Islam and shifted their political loyalties to the new Mataram Islamic court (ca. C.E. 1570–1755) that was based in the old central Javanese heartland. While outwardly Islamic, this new Mataram court retained most of the cultural characteristics of Java's previous Hindu-Buddhist age.

See also: Agriculture; Buddhism; Hinduism; Islam, Spread of; Language and Writing; Melaka; Spice Trade.

FURTHER READING

Kinney, Ann R. *Worshipping Siva and Buddha: The Temple Art of East Java*. Honolulu: University of Hawaii Press, 2003.

Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*. Vol. 1. Cambridge, MA: Cambridge University Press, 2000.

Junk

See Technology and Inventions.

Khmer Empire

Ancient Southeast Asian kingdom (C.E. 802–1432), based in what is now Cambodia, that once included the adjacent regions of Thailand and Laos. Historians use the name Angkor ("city") to refer to both the ancient capital city and the ancient kingdom. The boundaries of the realm were never clearly defined, and Angkor is best understood as a confederation of populations willing to submit to a central authority.

Angkor was the successor to previous Khmer regional states centered in the upper Mekong River basin, which began to leave **inscriptions** in the sixth century C.E. In contrast, Angkor was centered on the northern edge of Cambodia's Great Lake, Tonle Sap. Its productive wet-rice agriculture depended on the annual monsoon season that flooded Khmer fields. Several rulers constructed enormous reservoirs and a network of canals around the capital city to provide a more secure source of irrigation for the rice paddies, and to reinforce the ritual symbolism of their capital.

The Angkor state was founded by King Jayavarman II (r. C.E. 802–835), who established the state *Devaraja* ("god-king") cult, which celebrated the unity of the Khmer people under the favor of the Hindu god Siva. Jayavarman's capital was at Hariharalaya, southeast of Angkor. Angkor became the realm's continuing capital under Yasovarman I (r. C.E. 889–900), and was named Yasodharapura in his honor. Suryavarman I (r. C.E. 1002–1049) extended Angkor's territory in all directions and consolidated its political authority. Suryavarman II (r. C.E. 1113–ca. 1150) defended Angkor against its Cham neighbors in central Vietnam, and also sponsored the construction of the Angkor Wat temple complex, dedicated to the Hindu god Visnu.

In 1177, forces from neighboring Champa raided Angkor, desecrated its temples, and carried off the state's wealth and significant numbers of its population. Jayavarman VII (r. C.E. 1181–ca. 1218) restored order through a series of military victories against regional opponents, then successfully defended his realm against the Chams. He also built a new capital city adjacent to Angkor Wat at Angkor

RISE AND DECLINE OF THE KHMER EMPIRE

C.E. 550–800 Pre-Angkor regional states arise in upper Mekong River basin

C.E. 802–835 Rule of Jayavarman II; founds the Khmer Empire and initiates the royal *Devaraja* Siva cult at Hariharalaya

C.E. 889–900 Rule of Yasovarman I; founds Khmer capital of Angkor

C.E. 1002–1049 Rule of Suryavarman I; extends the Khmer realm, especially to the north and west

C.E. 1113–CA. 1150 Rule of Suryavarman II; builds temple complex at Angkor Wat (which means "city monastery") dedicated to the Hindu deity Visnu

C.E. 1177 Cham invasion devastates the Khmer realm

C.E. 1181–CA. 1218 Rule of Jayavarman VII; restores order and Khmer power; builds Angkor Thom (which means "Angkor the Great") and its Bayon Mahayana Buddhist temple complex

C.E. 1431 sacking of Angkor by Ayudhya forces from Thailand

C.E. 1432 Khmer political center shifts to Phnom Penh, after which Angkor is deserted

Thom, which he centered on the Bayon Mahayana Buddhist shrine.

Following the death of Jayavarman VII, the Angkor state gradually declined, evidenced by the decreased number of inscriptions recording state activities. When the Chinese envoy Zhou Dagua visited Angkor in 1295–1296, he described it as a royal city in decay, which he attributed to a series of exhausting wars against Thai armies.

The armies of the region of Ayudhya (in Thailand), based in the former north and west Angkor territories, sacked the Angkor capital in 1431 and brought an end to the Angkor-based Khmer realm. They carried Angkor's royal regalia back to the Thai capital, where it remains to this day as the symbolic source of Thai political authority. In 1432, Cambodian rulers, who also claimed to be Angkor's legitimate successors, established a new Khmer capital at Phnom Penh on the Mekong River.

See also: Agriculture; Angkor Wat; Sukhotai and Ayudhya; Vietnam.

FURTHER READING

Higham, Charles. *Civilization of Angkor.* Berkeley: University of California Press, 2002.

Snellgrove, David. *Angkor: Before and After: Cultural History of the Khmers.* Boston: Weatherhill, 2004.

Korea

Peninsula in northeastern Asia, first settled by migrating populations from Mongolia and Siberia from 7000–5000 B.C.E., and frequently thereafter ruled or influenced by neighboring dynasties in China. The first centralized states appeared in Korea by about 400 B.C.E. These states fought among themselves for control of the peninsula before uniting under the control of the Chinese Han **dynasty** in 108 B.C.E. During the next 2,000 years, a series of Buddhist and Confucian dynasties would rule the region.

ORIGINS

The legendary first Korean state was Old Choson, from an old name for Korea. ("Old Choson" distinguishes this legendary Korean civilization, associated with the fourth century B.C.E., from the later Choson state that began in 194 B.C.E.) This realm, in the northern Liao and Taedong River basins, struggled to remain independent from its powerful Chinese neighbor under the Han dynasty (206 B.C.E.–C.E. 220).

Around 194 B.C.E., an unsuccessful rebel against the Han dynasty fled to Korea and established an independent state named Choson based at Pyongyang, the modern capital of North Korea. The Han emperor Wudi (r. ca. 141–87 B.C.E.) conquered Choson in 109–108 B.C.E., and thereafter established several semi-independent military garrisons in northern Korea. The most powerful of these was the military commandery of Lelang (108 B.C.E.–C.E. 313) based at Pyongyang. Three Korean tribal warlord confederations (Mahan, Pyonhan, and Chinhan) occupied southern Korea, while rival alliances claimed other portions of Korea. During the Three Kingdoms Period (ca. C.E. 300–700), the southern confederations evolved into the central Paekche Kingdom, the northern Koguryo Federation, and the southeastern Silla Kingdom.

Koguryo, which consolidated its hold over the north following the fall of the Han dynasty in 220, was the most powerful of these kingdoms. After reaching its height in the fifth century C.E., Koguryo declined in the mid-sixth century, caught between the attacks of competing Chinese forces to its north and the rise of Paekche to its south. Paekche seized the Han River basin, but its success was short lived. An alliance between the new Chinese Tang dynasty (C.E. 618–907) and the southern Silla kingdom conquered Paekche in 668.

SILLA, KORYO, AND YI DYNASTIES

By 668, Silla had consolidated its authority over most of the Korean Peninsula. During the so-called Unified Silla **era** (C.E. 668–918), Silla rulers partnered with Korean Buddhists to administer their realm. They also established the Confucian Academy to train scholar-bureaucrats for a new civil administration, and experimented with a formal examination system to fill the civil service with qualified candidates. The resulting political system depended on *hwarang* (flower knights), a paramilitary youth organization that trained and educated the sons of the Silla elite. The hwarang instilled in their pupils the "bone-rank" system, a societal **hierarchy** of warrior-**aristocrats** based on birth.

By the 870s, powerful landholding regional clans began to challenge the Silla dynasty's central authority. Regional autonomy and limited court authority characterized the last 40 years of the dynasty, known as the Later Three Kingdoms era (878–918).

In 936, a former merchant named Wang Kon (877–943) rose to power, supported by regional Silla landlord clans. Wang founded the new Kaesong-based Koryo dynasty (from which the name Korea is derived). Koryo rulers abolished the Silla ranking system and replaced it with their own set of status distinctions. A literate class of bureaucrats who had passed the state's Confucian civil service examinations led Koryo society, in partnership with Buddhist clergy who had qualified by a separate examination. A privileged **hereditary** ruling class that included royalty, civil bureaucrats, military bureaucrats, and the Buddhist priesthood controlled the Koryo state's administration.

The Koryo civilian bureaucracy held authority until 1170, when the state's generals, supported by a network of military-bureaucrats, began a 20-year civil war in response to the increased concentration of power in the court. Other state bureaucrats who opposed court **absolutism** joined their ranks, and from 1196–1258 the Choe family clan of military dictators held power. The Mongols ended this period of military-bureaucratic partnership by invading Korea in 1258 against limited opposition. They restored the Koryo royal family, placing it under the watchful eye of a Mongol overlord. The Mongols extracted heavy taxes, labor, and military services from Koreans, especially during the era of the Mongolian military campaigns against Japan (1274–1281).

General Yi Song-gye defeated the remnants of Mongol authority in 1364, following the fall of the Mongol dynasty in China during the 1350s. After 28 years of civil war, he deposed the Koryo rulers in

1392, founding the Yi dynasty (C.E. 1392–1910), based at present-day Seoul, modern South Korea's capital. Yi Song-gye appeased the new Ming dynasty rulers of China (C.E. 1368–1644) by paying **tribute** and accepting subordinate status to China. Subsequent Yi and Chinese rulers described the relationship as that between "younger brother and elder brother."

Yi and his successors implemented a new Confucian **monarchy** and reduced Buddhism to a secondary religion. He seized church lands, closed temples, and placed the supervision of restricted Buddhist activities under the watchful eye of a newly empowered landowning **aristocracy** known as *yangban*. He and subsequent Yi rulers stressed Confucian ancestor worship and its rituals over Buddhist traditions. They also implemented a Confucian social code that discouraged social practices that had reinforced the autonomy of the traditional family clans, such as taking multiple wives, widow remarriage, and marrying within the family clan network. In return, the gentry were granted the hereditary right to both civil and military appointments. Confucian examinations and official appointments were only open to yangban candidates—in contrast to the Chinese Confucian examinations and bureaucracy that were in theory open to anyone.

Confucian art and literature replaced Buddhist art and culture in the early Yi era. However, the Yi monarch Sejong (r. C.E. 1418–1450) sponsored the development of a more independent Korean culture, based in the creation of a new Korean alphabet, known as *hangul,* which replaced prior dependence on Chinese writing.

In 1471, Yi monarchs adopted a national code that defined their Korean adaptation of Confucian government. The new code ignored traditional clan-based territorial divisions and reorganized Korea into eight provinces and subordinate counties administered by state bureaucrats rather than clan landlords. In theory the Yi monarch was supreme, but in practice he and his officials were examined by bureaucratic review boards (or censors) who had the authority to charge any state official, even the emperor, with misconduct or mismanagement. A guilty official was removed from office, his economic resources were confiscated, and he might even be imprisoned or put to death.

The first centuries of Yi rule were highly innovative and productive. Over time, however, the Yi system lapsed into **aristocratic** factionalism and administrative ineffectiveness, and it never fully recovered from an attempted Japanese invasion in 1592–1598. Despite this setback, the continuing prosperity of the Korean economy also contributed to the problems for the Yi rulers, as newly wealthy Korean farmers and a new Korean merchant class began to buy *yangban* status.

See also: Archeological Discoveries; China; Japan; Language and Writing.

FURTHER READING

Eckert, Carter J., et al. *Korea Old and New.* Cambridge, MA: Harvard University Press, 1990.

Holcombe, C. *The Genesis of East Asia, 221 B.C. to A.D. 907.* Honolulu: University of Hawaii Press, 2001.

Lee, Ki-Baik, et al. *A New History of Korea.* Cambridge, MA: Harvard University Press, 2005.

Pai, H. *Constructing Korean Origins.* Cambridge, MA: Harvard University Press, 2000.

Language and Writing

The frequent migrations of people and ideas throughout ancient Asia and the Pacific led to cultural mixing that produced a diversity of linguistic and literary traditions. The linguistic heritage in ancient China developed as a mixture of pictorial and symbolic representations of concepts rather than sounds, a heritage that was adapted by China's Korean and Japanese neighbors. In India, early written forms gave way to an alphabet in which each character represented a spoken sound. Indian and Southeast Asian writing traditions derived from early India's Hindu and Buddhist heritage. This was in sharp contrast to China and its neighbors, where literature addressed the **secular** order of humanity rather than focusing on religious concerns, reflecting China's Confucian tradition.

EMERGENCE OF WRITTEN LANGUAGE

The earliest Asian literature was composed in Chinese and in **Sanskrit** and Pali (a Prakrit, or local Indo-Aryan, language related to Sanskrit), the original languages of Hinduism and Buddhism. People in Korea, Japan, and Southeast Asia later modified the variety of Indian and Chinese scripts and texts to meet their own cultural needs.

South and Southeast Asian Scripts

Written script in India was late to develop relative to the rest of Asia. In the third century B.C.E., King Asoka erected pillars containing **inscriptions** in Prakrit, written in Brahmi script, which later developed into the Devanagari script that is used today by Sanskrit and Sanskrit-derived north Indian languages. South Indian languages, by contrast, derived from the Tamil language, which developed a different script tradition from the same Brahmi linguistic base. Southeast Asians also developed their own initial language scripts during the first millennium C.E. by adapting Brahmi script to their own local needs.

Chinese Written Language

Between 1500 and 1000 B.C.E., Chinese priests developed the earliest Chinese **pictographic** script. Modern Chinese script began to take shape as a more linear representation of the pictographs in *xiaozhuan* script around 700 B.C.E. The *lishu* script, which was better suited for rapid sketches because it used fewer strokes, became common after 500 B.C.E. The new script was more efficient for government bureaucrats in an **era** marked by significant increases in governmental authority.

LANGUAGE AND WRITING

CA. 1500–1000 B.C.E. Chinese priests develop the earliest Chinese pictographic script

CA. 800–600 B.C.E. *Brahmana* religious textual manuals composed in India

CA. 700 B.C.E. Linear *xiaozhuan* script develops in China

CA. 600–200 B.C.E. *Upanishads,* philosophical religious epics, composed in India

CA. 500 B.C.E. Simplified *lishu* script evolves in China

CA. 500 B.C.E.–200 C.E. Indian epic the *Mahabharata* committed to writing

CA. 400 B.C.E. The *Arthasastra,* early book of advice for rulers consolidating power, written in India

CA. 300 B.C.E. (*Li Sao*) *The Lament,* China's first extended epic poem, composed by Qu Yuan

CA. 250 B.C.E. Indian king Asoka (r. ca. 273–ca. 232 B.C.E.) erects pillars containing inscriptions in Prakrit script

CA. C.E. 100 Earliest Korean script, *hanja,* evolves from Chinese characters

CA. C.E. 1000 World's first novel, *The Tale of Genji,* written by Japanese courtesan Murasaki Shikibu

CA. C.E. 1200 Korean *kugyol* script develops from earlier *hanja* script

CA. C.E. 1420 Korean king Sejong (r. C.E. 1418–1450) commissions the development of a new Korean script, *hangul*

The continuing evolution of Chinese script was tied to the development of Chinese calligraphy, which placed focus on disciplined and continuous brush strokes. *Kaishu* ("standard script") appeared near the end of the Han **dynasty** (ca. 206 B.C.E.–C.E. 220). *Xingshu* ("running script"), a cursive version of kaishu appeared shortly thereafter. *Caoshu* ("grass script") developed among calligraphers in the fourth century C.E. as a continuous flowing brush script.

Korean and Japanese Scripts

Both the Korean and Japanese scripts developed from Chinese script. The earliest Korean script (*hanja*), which came into existence in the first century C.E., adapted Chinese characters that combined both sounds and meanings. In the thirteenth century, the *kugyol* script was introduced, in which characters distinguished between sound and meaning. At the time, classical Chinese was the preferred language in Korean literary culture. King Sejong (r. C.E. 1418–1450) of the Yi dynasty (C.E. 1392–1910), in his attempt to reassert an independent Korean culture, commissioned the development of a new Korean script, *hangul*. Despite his attempts, Korean literature was still almost exclusively composed in Chinese until Korea achieved independence in 1945 and made hangul the official language. Prior to that time, where hangul appeared, it was paired side by side with Chinese.

Japanese writing and literature also derived from Chinese roots. In the fifth century C.E., the Japanese used Chinese characters (*kanji*) in a system called *kanbun,* "Chinese writing." Kanbun used Chinese characters to represent both ideas and syllables. Although kanbun used Chinese characters, it employed Japanese rather than Chinese grammar. Finally, a new writing system, *kana,* developed that used kanji to represent things or ideas, and simplified versions of the characters to represent sounds.

Hiragana writing, in which characters represent Japanese words, developed in the eighth century C.E. Many literate Japanese continued to use the older kanji system, while hiragana became associated with women's compositions. The *Tale of Genji,* sometimes

Several major Asian languages, including Chinese and Japanese, employ pictograms–characters that represent words or concepts–rather than letters. The characters on the Japanese lanterns shown here indicate the names of sponsors of the temple that contains the lanterns. (Karen Beard/Taxi Japan/Getty Images)

called the world's first novel, was written in hiragana by Murasaki Shikibu (ca. 1000), a resident of the Kyoto court (C.E. 784–1185). *Katakana* ("part kanji"), yet another option, used a Japanese script in which characters represented individual syllables. It was originally developed in the ninth century to aid in the pronunciation of Chinese Buddhist scriptures, but by the fourteenth century was in wider use.

LITERATURE

Philosophical, moral, and religious texts assumed great importance in the Asian cultural tradition. Literacy and learning were widely respected; even Japan's *samurai* warriors were literate and composed poetry. Despite the fact that women did not attend regular schools, they sometimes acquired literacy from family members. This was especially the case in imperial Japan. In India, where religion was such a focal part of life, most of the early literature was associated with India's Hindu and Buddhist traditions. In China, Confucian tradition favored philosophical texts that focused on human existence in this world rather than speculating on an afterlife.

Indian Literature

India's literary tradition began with oral compositions that by the fourth century B.C.E. were recorded as sacred Hindu texts composed in Sanskrit, Prakrit, and Pali. The earliest of these were the four *Vedas,* which recorded the mythology, rituals, ritual chants, and magical spells of Indian society from about 1600 to 1000 B.C.E. The *Brahmana* (800–600 B.C.E.), textual manuals for Brahmin priests, provided further detail for elaborate religious rituals. In contrast, the *Upanishads,* composed between 600–200 B.C.E., were philosophical, discussing the nature of the universe and the place of humans in it.

The *Upanishads* were foundational to the development of Hindu law, as they addressed good and evil, human morality, and duty. These themes were developed in contemporary and subsequent literature. The Buddha's teachings and the early interpretations of these by Buddhist monks (the *Sangha*) provided a Middle Way between Vedic ritual and the philosophical meditations of the *Upanishads,* as collected in the Buddhist *Pitaka* texts (ca. 500 B.C.E.). Early discourse on Hindu law developed in the *Dharmasastras* from roughly the same era.

The issues that were being addressed in these various religious texts were popularized in the *Mahabharata* epic tale about a legendary battle between two early Vedic-era tribes. The epic evolved as an oral text from roughly 1600 B.C.E., and, with later additions, did not reach its final form until roughly C.E. 200. The *Ramayana* epic poem, which dates from roughly 300 B.C.E., is a symbolic story about rightful human conduct that offers a glimpse into divine involvement in human affairs. Much like the contemporary *Bhagavad Gita* subsection of the *Mahabharata* epic poem, it supports Hinduism's developing Bhakti devotional tradition because it speculates on the human-divine relationship.

The *Arthasastra,* which is attributed to the fourth century B.C.E. Mauryan statesman Kautilya, critiqued the age of heroic chivalry that was portrayed in the *Vedas* and the *Mahabharata*. It also provided an alternative to the proposal in the *Dharmasastras* that kings should lead by moral example. Instead, it is a textbook for rulers consolidating power into a new imperial regime, in the tradition of the third-century B.C.E. Chinese text titled *The Book of Lord Shang,* by Li Si, the prime minister of China's Qin Dynasty (221–206 B.C.E.). The *Arthasastra* encourages rulers to seize, hold, and manipulate power, but it also advises that prolonged tyranny ultimately leads to popular rebellion. The wise ruler thus cultivates his subjects' respect by remaining directly involved in the affairs of state, administering justice, and even showing compassion when it is to his advantage.

India's early literary tradition culminated in the classical Sanskrit compositions of the Gupta era (ca. C.E. 320–550), notably the *kavya* poetry and drama of Gupta-era authors. These writings on love, nature, and morality were intended for recitation and performance, to bring an emotional response from their audience. Human emotions were personified in seasonal and day and night settings, as well as in birds, beasts, and flowers.

Chinese Literature

China's early literature focused on secular themes, particularly the conditions required for successful governance. Earlier oral mythological and historical tradition was codified in the era of the Zhou dynasty (1122/1027–403 B.C.E.) in the works that are collectively referred to as the Confucian Classics, attributed to the statesman and philosopher Confucius (Kungfutzu, 551–479 B.C.E.). These include the *Book of Songs* (a collection of mythical folk ballads), *The Book of Changes* (about magical spells), and the *Book of Rituals*. They also feature collections of historical documents; the histories of the Xia, Shang, and early Zhou dynasties; and a collection of Confucius's writings, *The Analects,* which were collated by his students after his death. All of these writings influenced the commentaries and philosophical writings of subsequent Confucian scholars in China, Korea, Japan, and Vietnam.

Confucian tradition dictated that early Chinese poetry conform to rigid standards and contain some moral lesson. *Li Sao* (*The Lament*) by Qu Yuan (ca. 340–278 B.C.E.) was China's first extended lyric poem. It addresses the sorrows of an exiled prince, who rides on dragons and serpents in his travels from heaven to Earth. The poem incorporates early Chinese legends and myths but above all explores the conflict between the individual and the group and ultimately asserts the hero's love for Chinese people.

The era of the Han dynasty (206 B.C.E.–C.E. 220) was notable for the development of Chinese governmental record keeping. These records initiated the tradition of compiling official dynastic histories, which typically were written by the succeeding dynasty. The first of these, *The Record of the Historian,* a Han-era history of the Qin dynasty, is attributed to the court historian of emperor Han Wudi (r. ca. 141–87 B.C.E.), Sima Qian. In the Han age, *yuefu,* popular narrative and lyric ("folksong") poetry, developed, as best represented in the *Flight of the Phoenix to the*

MAJOR LINGUISTIC GROUPS OF ANCIENT ASIA AND THE PACIFIC

Asian language families are many and diverse—from the languages spoken in the Philippines, Malaysia, and Indonesia, to the Sanskrit, Hindi, and Pali of South Asia, to the Sino-Tibetan and Austro-Asiatic languages of Southeast Asia, and the Indo-European and Ural-Altaic languages of central Asia.

Southeast, a tragic tale of lovers under pressure from their parents and families.

Under the Tang (C.E. 618–907) and Song (C.E. 960–1279) dynasties, Chinese literary expression flowered in a wide range of neo-Confucian writings that attempted to blend Confucian and Buddhist traditions. Buddhism advocated literary creativity as an appropriate activity through which to explore the limits of the human mind. Such an activity also reinforced the traditional Confucian notion that hu-

mans should exercise the kind of self-discipline required of a serious writer. The perfected individual might then be a more productive member of society. Scholars, popular writers, and poets debated whether there should be a limit on government leadership and stressed the need to believe once again in the moral capacities of humanity. They argued for a less regimented society as the means to inspire human creativity.

Tang and Song texts were printed using carved woodblocks, which made written works widely available among an increasingly literate Chinese urban public. Among these were popular accounts of Buddhist pilgrims, printed encyclopedias, interpretive histories, and neo-Confucian philosophical essays. Tang-era writings still conformed largely to Confucian models, but Song era authors fully embraced creativity for its own sake. They even openly indulged in the subtle pleasures of life, which Confucian scholars regarded as dangerous to the welfare of humanity.

Chinese authors finally produced novels during the Yuan dynasty (C.E. 1279–1368), when two of China's "Four Classic Novels," *Water Margin* and *Romance of the Three Kingdoms,* were published. *Monkey, Journey to the West* (ca. 1590) and *Dream of the Red Chamber* (1792) are the other two, to which many add a fifth major composition, *Golden Lotus* (1610). In each of these stories, the lead heroic characters all end as immortals or supernatural beings with magical powers. The novels blend traditional Chinese culture with Buddhism in their acceptance of the notion of reincarnation and *karma* (force generated by one's actions) that leads to the fate of the individual. They offer a commentary on Yuan social and religious conventions, often portraying the negative societal consequences of choosing individualism over the commitment to uphold the Confucian traditions of the past.

See also: China; India; Japan; Java; Korea; Myths and Epics.

FURTHER READING

De Bary, William Theodore, et al., eds. *Sources of Japanese Tradition*. Vol. 1. New York: Columbia University Press, 2001.

Embree, Ainslee, ed. *Sources of Indian Tradition*. 2nd ed. New York: Columbia University Press, 1988.

Lee, Peter H., Yongho Ch'oe, and Hugh H. W. Kang. *Sources of Korean Tradition*. New York: Columbia University Press, 1996.

Mair, V., ed. *Columbia History of Chinese Literature*. New York: Columbia University Press, 2002.

Mandate of Heaven

Political and social philosophy, or *tian ming* ("mandate" or "decree" of heaven), that served as the ancient Chinese explanation for the success or failure of Chinese civilization. The Chinese believed that a **dynasty** fell, or leaders failed, because they lost the moral right to authority that was given by heaven alone. In this view, heaven was not a personal god but an all-pervading cosmic power. Scholars of the Zhou dynasty (ca. 1122/1027–403 B.C.E.) developed this **doctrine** to explain the Zhou conquest of the previous Shang dynasty (1766–1122/1027 B.C.E.) and to legitimate their new dynasty.

Initially, this political theory argued that heaven was committed to the welfare of humanity. For this reason, heaven established rulers who assumed responsibility for the welfare of their human subjects. Heaven mandates that select people be in charge and supports rulers and their dynasties as long as they rule justly, fairly, and wisely. If a dynasty or ruler ceases to rule justly or wisely, and begins to serve his or her own interests, heaven revokes the mandate, and the ruler or dynasty falls. Heavenly authority then passes to another family-based network, which is obligated to revolt against

and overthrow the failed dynasty. The mandate is not equivalent to blind fate or destiny. Instead, it imposes a code of appropriate human behavior. Humans are free to rule justly or unjustly; they are even free to harm the people they rule. If they do so, however, their rule will come to a swift end as heaven passes on its mandate to another family.

In contrast, the concept of *ming,* or destiny, implies that certain events are beyond human control. Things that happen in the physical world—earthquakes, sickness, wealth, floods, famine, and other hardships—are the direct result of heaven's actions, and thus humans cannot affect them. Human misconduct, however, such as human abuse of the physical environment, can create imbalances in the physical world.

During the sixth century B.C.E., Confucius applied the concept of tian ming to human relations, insisting that each person was obligated to contribute to the welfare of others. According to Confucius, the Mandate of Heaven applied to all human obligations and actions. It postulated a moral order to the universe that paralleled the physical order and promised that humankind ultimately would achieve social harmony. Attaining proper human relationships (*li*) was thus the goal of tian ming.

Thus, human success was ultimately the consequence of successful human actions that were respectful of and in balance with the heavenly and natural orders. Human failure was equally the result of inappropriate human actions that were ultimately self-serving rather than sensitive to and focused on wider societal need.

See also: China; Confucianism.

FURTHER READING

Hucker, Charles O. *China's Imperial Past, An Introduction to China's History and Culture*. Palo Alto, CA: Stanford University Press, 1994.

Schwartz, Benjamin I. *World of Thought in Ancient China*. Cambridge, MA: Harvard University Press, 1985.

Melaka

Narrow, 500-mile-long (800-km-long) **maritime** passage separating the Malay Peninsula from the island of Sumatra. The strait takes its name from the port-based Malay state of Melaka (or Malacca). This state was founded in ca. 1390 by the Sumatra-based Malay prince Parameswara (d. 1414) who shifted his court to Melaka from what is now Singapore.

The Melaka Strait became the major shipping route between India and China in the fifth century C.E. At this time, Indian Ocean shipping shifted south from prior routes that involved stopovers and portages across the Malay Peninsula's Kra Isthmus. A maritime state, known to the Chinese as Srivijaya, dominated the strait from the fifth to fourteenth centuries C.E., until the establishment of Parameswara's realm. Less than 50 years later, Melaka had become the wealthiest commercial port in Asia. It served as both the connecting hub in the trade from India to China and the international source of Indonesian spices.

Melaka's initial success was a result of special diplomatic ties with China's Ming court. Merchants wishing to trade in China's ports were given special treatment if they first made stopovers in Melaka. In return, Melaka was obligated to keep the strait free of piracy, thereby assuring the regular flow of Western luxuries into China. Zheng He (C.E. 1371–1433), a famous Ming maritime admiral, visited Melaka several times between 1409 and the early 1430s with his fleet of ships. His voyages were intended to reinforce Melaka's position as China's favored Southeast Asian port of trade, as well as to ensure the security of the strait.

The Ming court ended its aggressive diplomatic voyages into the region in the 1430s and subsequently began to restrict China's overseas contacts. This led Melaka's ruler, Sri Maharaja (r. 1424–

1444), to convert to Islam (taking the name Muhammad Shah) in order to encourage the Muslim merchants who dominated the Indian Ocean trade to use his port. His patronage of Islam also served to legitimize and extend the Sultan's control over other ports in the region of the strait.

The Portuguese seized Melaka in 1511, wrongly believing that by holding Melaka they could monopolize Indian Ocean trade. As the Portuguese discovered, Melaka's power was based not on its military strength, but on its favor among the Asian commercial community. It prospered because it provided a secure and neutral marketplace for its diverse international community of merchants to exchange the profitable luxury goods demanded by consumers in both the East and the West. Although the Portuguese failed to develop a monopoly over Indian Ocean trade, they did build a profitable commercial enterprise based in Melaka that allowed them to dominate the flow of Southeast Asia's spices to European marketplaces through the sixteenth century.

See also: Indian Ocean Trade; Islam, Spread of; Spice Trade; Zheng He.

FURTHER READING

Andaya, Barbara Watson, and Leonard Y. Andaya. *A History of Malaysia*. Honolulu: University of Hawaii Press, 2001.

Hooker, Virginia Matheson. *A Short History of Malaysia*. Sydney, Australia: Allen and Unwin, 2003.

Wheatley, Paul, et al. *Melaka: The Transformation of a Malay Capital, c. 1400–1980*. Kuala Lumpur, Malaysia: Oxford University Press, 1983.

Micronesia

Located in the western Pacific Ocean, an island chain settled by waves of Malayo-Polynesian and Melanesian seafarers beginning in roughly 4000 B.C.E. Modern-day Micronesia consists of the Marshall Islands, Guam, the North Mariana Islands, and the Caroline Islands, including Palau and the Micronesian Federated States of Yap, Chuuk, Pohnpei, and Kosrae. The inhabitants of these islands share similar ethnicity, but are culturally diverse because of their varying geographical and historical circumstances.

Austronesian-speaking voyagers from the Philippines settled Palau and the Marianas between 4000 and 1500 B.C.E. Later waves of Oceanic-speaking Melanesians from the South Pacific arrived in Yap between 1300 and 200 B.C.E., followed between 500 B.C.E. and C.E. 1 by a third wave of Melanesian voyagers who settled the Marshalls, Kosrae, and Pohnpei. Ancestors of the voyagers who settled these latter islands later migrated to other parts of the Carolines.

SOCIAL AND ECONOMIC ORGANIZATION

The people in Micronesian societies commonly lived in villages on the lower slope of mountains on the edge of coastal plains, where they could plant taro, a tuber, or rooted vegetable, that was their principle subsistence crop. Men and women had separate but equally important economic chores that ensured local prosperity. Before the arrival of Europeans, around C.E. 1500, men spent most of their productive time collecting fish, sea turtles, and octopus; they also harvested coconut and breadfruit trees, and hunted native animals, notably land snails and tropical birds. Women cultivated the land (for taro), gathered wild foods from the jungle, fished inland ponds, and wove cloth and mats from tree and plant fibers. Village houses were clustered in clan groups; the houses of clan chiefs and other community elders were built on wooden platforms, which also acted as community meetinghouses. Cross-family and clan social activities were based in male and female clubs that were graded by age.

POLITICAL SYSTEMS

The traditional political systems of Micronesia varied greatly. The society on Yap, for example, never had a strong, centralized authority. Order was concentrated around a local chief who shared power with a council composed of the heads of the family clans. Village societies were arranged in an island-wide ranking based on the debts owed by one village to others.

In contrast, the islands of Kosrae and Pohnpei were once ruled by supreme chiefs. Kosrae traditionally had a head chief who ruled the entire island, assisted by sectional chiefs. The head chief was entitled to receive a share of all local production (food or handicrafts) in payment for successfully leading the community. Pohnpei initially had several roughly equal confederated chiefs who had control over villagers in their region. They were assisted by "talking chiefs," chosen from the second-ranking family clan in each region, who acted as designated mediators if disputes arose between two regions. As in Kosrae, the two elite clan lines received payment in the form of a share of local production from the local non-**aristocratic** clans.

The Kosrae and Pohnpei supreme chief system reached its height, perhaps as early as the eighth century C.E., under a mysterious line of kings known as the Saudeleurs. These kings built a spectacular capital city at Nan Madol, on the southeastern shore of Temwen Island, off the coast of Pohnpei. The remains of this city consist of a coral reef of 92 human-made islets intersected by a network of artificially constructed canals and waterways, protected by seawalls of loglike basalt stone that are up to 50 feet (15 m) high and 20 feet (6 m) wide. The focal centers of this ancient city were the islet sites of elaborate funeral rituals, the residences of priests, and royal tombs, which were surrounded by the islet residences of state elite and marketplaces.

Much of Micronesian society and culture significantly changed after the 1525 arrival of the first Portuguese explorers in Yap. Early Portuguese and Spanish contact provided Micronesian societies with their first access to iron and also introduced domestic animals, such as goats, cows, and chickens, into the local economy.

See also: Polynesia.

FURTHER READING

Bellwood, Peter. *Conquest of the Pacific: The Prehistory of Southeast Asia and Oceana*. Oxford: Oxford University Press, 1979.

Quanchi, Max, and Ron Adams. *Cultural Contact in the Pacific*. Cambridge: Cambridge University Press, 1993.

Mongols

From the grassland regions (steppes) north of China, **seminomadic** population who, between C.E. 1206 and 1481, conquered and ruled the largest land empire in history. The Mongol Empire at its height stretched across Eurasia from China and Korea in the east to the Middle East and eastern Europe in the west. These **nomadic** clans, previously known as Tartars (after the central Asian tribe that had once controlled them), fostered cross-cultural exchanges between East and West, by being culturally tolerant, providing the opportunity for secure transit across Mongol-controlled territories, and recruiting non-Mongols into their administration.

CULTURE

The Mongols' success was based on their skills as warriors, and their great military advantages were mobility and superior cavalry tactics. They could cover 100 miles (160 km) in a day, carrying whatever small food rations and supplies they needed in their saddlebags and, therefore, never having to pause to wait for their supplies. They were the first to use signal flags to coordinate their battlefield actions. Their short, compound reflex bows allowed them to

ANCIENT WEAPONS

The Mongolian Bow

Until the development of breach-loading (cartridge) firearms in the 1800s, the ancient Mongolian composite bow was the most effective long-range tool in war and hunting. It was vastly superior to any military technology in the medieval West, including the famed English longbow.

The Mongolian bow was made of three layers: an animal horn or pounded bone outer layer covered a wooden birch core, and a back made of layers of sinew (animal gut) taken from deer, moose, or mountain sheep. The bow was then wrapped with boiled birch bark or fish skins to protect it from moisture. These layers were secured using glue made from boiled fish bladders, which was resilient and highly moisture resistant. Alternatively, the binding glue might be made from boiled animal hides, but this method was less durable and absorbed moisture.

After construction, the bow was wrapped in ropes and placed in a form to dry and harden at room temperature for a year or more. This made it extremely strong and allowed it to keep its shape and snap during years of shooting. The finished bow was normally about 5 feet (1.5 m) in length, and, when strung, it had a double curve, with the top and bottom of the bow bent away from the archer; this double curve gave the bow its power.

Compared to an English longbow that had a draw of about 70 to 80 pounds (32 to 36 kg), the Mongol bow had a pull of 100 to 170 pounds (45 to 77 kg), depending on the strength of the archer. The English longbow could shoot up to 250 yards (230 m), but the Mongol bow could hit a target at 350 yards (320 m) and well beyond. A thirteenth-century record of Mongol ruler Genghis Khan (r. C.E. 1206–1227) reports a shot made by one of his master archers that reached 428 yards (390 m).

Warriors, both male and female, always carried at least two bows, one for long-range shooting and another for close-range combat. The Mongol bow was shot from horseback by pulling the bow away from the string, rather than pulling the bowstring back. Skilled archers timed shots to release when their horses' hooves were in midair, to avoid distortion in aim when horse and rider hit the ground.

load and fire at full gallop. As a result, the Mongols lost few battles.

Local populations often chose to submit and pay **tribute** to the Mongols rather than fight them because of the Mongols' reputation for cruelty to defeated foes. This aura of terror was promoted by Mongol spies and agents, who spread horrific tales about their exploits. Nevertheless, the Mongols actively recruited local allies. The thirteenth-century Mongol victory over China depended largely on the Chinese technicians, siege engineers, gun founders, artillery experts, and naval specialists who helped them overcome China's heavily fortified cities, defended by gunpowder weapons and explosives. The Mongol conquest of China marked the first widespread use of cannon in warfare.

HISTORY

The Mongol realm came into existence under Temuchin (C.E. 1155–1227), who was proclaimed Genghis Khan, "universal sovereign" (r. C.E. 1206–1227), by an assembly of all Mongol chieftains. This assembly acknowledged Genghis's conquests of central Asia, the Near East, and eastern Europe, and his initial victories in northern China. His success was a result of his ability to unite the traditionally divided tribes living in modern-day Mongolia under his personal leadership and to reorganize them into 1,000-man fighting and administrative forces (*minggan*). To maintain order among his ranks, he introduced a code of law that provided examples of appropriate military and social behavior. The code emphasized loyalty to the Mongol military over family clans, promised reward for meritorious service

MONGOL EMPIRE AT ITS GREATEST EXTENT, CA. C.E. 1300

From the steppe populations on the northern border of China, the Mongols, a semi-nomadic people, eventually conquered and ruled the largest land empire in history. Mongolian territory stretched across Eurasia from China and Korea in the east to the Middle East and eastern Europe in the west. Wherever they ruled, the Mongols adapted to the culture and society they conquered.

rather than **hereditary** social standing, and promoted ethnic and gender equality. Genghis's realm had four regional divisions (*khanates*): the Golden Horde in western Eurasia and Russia, the Ilkhans in modern-day Iran and the Middle East, the Chagatai in central Asia and Siberia, and what would

eventually become the Yuan in China and eastern Eurasia.

The unity of Genghis's reign did not last long, however, as the traditional Mongol tribal assembly system never had a clear succession policy. After Genghis's death, the Mongol chieftains divided the realm among his four sons, each of whom were based in one of the four regions. They proclaimed Genghis's third son Ogedei (C.E. 1186–1241) as his successor, now titled Mongol "emperor."

Ogedei, who reigned from his base in central Asia, continued to coordinate the successful military conquests begun by his father. By the end of Ogedei's lifetime, the Mongol realm had nearly reached its peak, **annexing** most of modern eastern Europe and the Turkish peninsula in the west. His successors, however, were too involved in family feuds to continue the conquest of the West. When Ogedei died, Mongol troops that were advancing on Vienna in modern-day Austria withdrew from eastern Europe.

In China, Genghis Khan's grandson Kublai Khan (r. C.E. 1260–1294) succeeded Ogedei as emperor, but the other three regional khans largely ignored his authority. In C.E. 1279, Kublai completed the Mongol conquest of China and Korea and founded China's Yuan **dynasty** (C.E. 1279–1350). Kublai failed in repeated attempts to take Japan (C.E. 1274, 1281), Vietnam (C.E. 1281, 1283–1285), and Myanmar (C.E. 1277, 1283, 1287). He also sent an ill-fated fleet against Java in C.E. 1292. These unsuccessful military expeditions drove the Yuan government into debt that Kublai's successors were not able to overcome. A Chinese military alliance deposed the Yuan realm in 1350, ending Mongol rule in China.

Mongol rule of Persia (modern Iran) effectively ended in C.E. 1335, with the death of the Ilkhan **monarch** Abu Said (r. 1316–1335). Regional leaders established independent authority until Timur (Tamerlane), a Turko-Mongol leader based in northern Persian and Afghanistan, intervened from 1370 to 1405. Tamerlane also ended Mongol control over Central Asia and united the Turkestan regions under his control in the 1380s. The Golden Horde finally fell to aggressive Moscow-based Russian forces in 1481.

LEGACY

Wherever they ruled, the Mongols adapted to the more culturally sophisticated societies they conquered. Their administration depended on local officials, a few Mongols who became literate and adopted local cultural practices, and foreigners. Although they had previously worshiped a universal sky god as well as various ancestral and natural spirits, Mongol rulers later converted to Buddhism, Islam, and Christianity in the lands they conquered. They also entered profitable business partnerships, encouraged **maritime** trade initiatives, and patronized **artisans** and artists, whose efforts provided an important source of tax revenue to finance the Mongol administration.

Above all, the Mongols insured the security of the vital east-west Silk Road trade route across central Asia, which became an important means for cultural exchange. Regular Mongol-sponsored intellectual meetings between Persian and Chinese scholars, scientists, physicians, and agricultural specialists promoted the spread of knowledge throughout the Mongol realm.

See also: China; Golden Horde; Silk Road.

FURTHER READINGS

Hildinger, Erik. *Warriors of the Steppe: A Military History of Central Asia, 500 B.C. to A.D. 1700*. New York: DaCapo Press, 2001.

Ratchnevsky, Paul. *Genghis Khan: His Life and Legacy*. Translated and edited by Thomas Nivison Haining. Oxford: Basil Blackwell, 1992.

Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.

Soucek, Svatopluk. *A History of Inner Asia*. New York: Cambridge University Press, 2001.

Monsoons

Seasonal winds that bring heavy rain from the Indian Ocean to Southeast Asia and the Indian subcontinent. The monsoons have dictated the yearly cycle of human existence in southern Asia for millennia. They have encouraged or discouraged human habitation and contributed to social organization and cultural innovation.

The term comes from the Arabic word *mawsim,* meaning "season," or "seasonal wind." The region has two monsoonal seasons. The summer, or southwestern, monsoon season lasts from late spring through August. The winter, or northeastern, monsoon occurs between October and December.

In summer, the dry landmass of Eurasia heats up and generates a mass of hot air. As this warm air rises, it creates an area of low pressure that draws in cooler air from the Indian Ocean. Cool ocean breezes blow over the continent from southwest to northeast, mixing with the continental warm air mass to produce heavy rain.

During late fall and winter, the central Asian landmass cools rapidly, producing cold, heavy air. The air pressure over the ocean decreases relative to that over the land, drawing cool continental air from the northeast back to the southwest. These winter winds are dry as they blow across the continent, but pick up moisture as they pass over the ocean. Upon encountering land, the moisture falls as rain in coastal regions such as southeastern India's Coromandel Coast.

Parts of east Asia's coastal regions, such as southern China, are subject to both monsoon seasons, making them agriculturally productive year-round. Others, notably India's southeastern coast and the Southeast Asian islands that lie south of the equator such as Indonesia, receive significant rainfall only during the winter monsoon. Farmers in southeastern India store rainwater from the winter monsoon in large tanks to make agriculture possible year-round. In other cases, depending on the proximity of the region to the equator, cultivation is possible during the dry winter season due to the continuing flow of water from the summer melting of snow in the Himalayas into the major river systems of China (the Yellow, Chang, and the multiple rivers of southern China) and southern Asia (the Indus, Ganges, and Brahmaputra).

Monsoons are necessary to support large populations in southern Asia, but they also can be extraordinarily destructive. Monsoons often bring floods that destroy crops and property and cause death from drowning, disease, or famine. The timing of the monsoons is uncertain, as is their duration and the amount of rainfall they bring. One year may bring floods while the next is marked by drought.

The development of wet-rice agriculture, which led to Asia's population boom, and the construction of elaborate dike networks to hold back seasonal monsoon floods are but two societal responses to the monsoons.

See also: Agriculture; Culture and Traditions.

FURTHER READING

McCurry, Steve. *Monsoon*. London: Thames and Hudson, 1997.

Parks, Peggy J. *Monsoons*. Farmington Hills, MI: KidHaven Press, 2006.

Wang, Bin. *The Asian Monsoon*. New York: Springer-Praxis, 2006.

Myths and Epics

Oral mythology told of the evolution of the earliest civilizations of Asia into settled agricultural communities. Over time, some of these folk traditions became the basis of more formalized spirit worship, as in, for example, Japan's Shinto tradition. Others were incorporated into more sophisticated narratives, as in India's epic poems *Mahabharata* and *Ramayana*.

Myths and epics popularized the cultural values of a society in a form that was accessible to even the uneducated commoner. They served to spread common cultural values among both the **aristocratic** and nonelite classes, as well as among both urban and rural populations. Indian and Southeast Asian kings and Chinese and Japanese emperors all claimed their authority as the legitimate heirs to the mythic figures of the legendary past. The epics might, as in the case of some sections of the Indian *Mahabharata,* consist of sophisticated philosophical discourse, but this was the exception rather than the norm.

FOLK DEITIES AND SPIRIT WORSHIP

Early Asian myths were oral tales that typically celebrated a culture's ancestral heroes or spirits of nature. Most ancient Asian peoples saw these forces as having powerful influence over their lives, and they created tales to explain and emphasize the role of those forces in everyday life. Myths were originally recited at public gatherings, perhaps around a communal campfire as was the case with the tales of ancestral heroes and gods featured in the Indian *Rig Veda*. The *Rig Veda* myths, which were first composed around 1800 B.C.E., focus on the spirits of the natural realm who are more or less subordinate to Indra, the supreme **deified** ancestor who is the lord of war. These myths were also recited in private and public rituals that were the foundations of Hindu religious tradition.

Many societies incorporated traditional, local myths and spirit worship into Buddhist, Daoist, and Confucian traditions, often adapting the ancient myths to reflect the beliefs and **pantheon** of the later religion. In such cases, the local spirits became subordinates of a universal **celestial** divine. In contrast, Japanese Shinto linked the early regional spirit cults to an **animistic** faith.

Shinto

Japan's folk deities were associated with the forces of nature, which had the capacity to help or harm early Japanese rural society. Japanese mythology begins with the creation myths about a divine brother and sister, Izanagi and Izanami, who created the Japanese islands and gave birth to the sun goddess Amaterasu, the guardian deity of the Japanese people, who lived in the "Land of the Rising Sun."

The Japanese spirit realm is populated by *Inari,* a complex of divine spirits associated with the power of abundance and food, especially rice. Inari are also often associated with the symbolic masters of transformation, *kitsune* (foxes), *tanuki,* and *tengu* (mountain and forest goblins). These figures have a long-standing connection to traditional **shaman** magic and the realm of ghosts, spirits, and demons. Male divinities are normally demons with flaming heads, fiery eyes, and swords. Female divinities often played more benevolent roles in human affairs. These include Kannon, the goddess of compassion and mercy who might intervene on humanity's behalf, and Shoki, the demon slayer. Some female divinities were said to bring misfortune, such as Adachigahara, who was fond of killing unattended children.

Chinese Folk Tradition

China's Confucian myths portray the early societal evolution of northern China in a series of tales about deified ancestors. These tales provided the foundation for the concept known as "Mandate of Heaven," wherein successful Chinese emperors are believed to be backed by celestial forces. The myths

LINK TO PLACE

Indian and Greek Epics

Greek and Indian epics both derive from an Indo-Aryan heritage that had its roots in the steppe regions of southern Russia. The Indian *Mahabharata* and *Ramayana* epics, which originated around 1600–1200 B.C.E., and the Greek epics that came to be known as Homer's *Iliad* and *Odyssey* (1100–800 B.C.E.), were originally oral compositions in verse form. In contrast to Homer's texts, which were in written form by 800 B.C.E., and despite the early development of Indian Sanskrit writing, the *Mahabharata* and *Ramayana* epics remained oral "works in progress" into the Gupta **era** (ca. C.E. 320–550). They still exist today in several versions that developed in both India and Southeast Asia. Thus, it is not technically correct to speak of "the" Indian epics.

In India and Southeast Asia, Indic epics are still vital, and their characters—Rama, Hanuman, Krisna, and Bima—are still worshipped as being divine. This is in contrast to the gods and heroes in the Greek epics, who are no longer a living part of the Greek culture. Rather, Zeus, Hera, Achilles, and others are said to be representative of the **classical** transition from belief in divine intervention to acceptance of humankind's accountability for its own successes and failures.

Both Vedic and Greek gods portrayed in the epics are beneficent beings who bestow prosperity and good fortune on their human followers. When evil occurs, it is not the work of the gods but the work of demons. The gods inevitably defeat the demons, whether in competitions that take place on earth or in the realms of the gods, and restore order to the realm of humanity. The divine beings are also moral and punish the sinful and wicked while rewarding the pious and righteous. But more important than being moral, they are mighty. They may do whatever they wish, and have imperfections, but have power over all creatures.

also served as examples and lessons on correct and incorrect human behavior.

Chinese mythology begins with the Three August Ones and the Five Emperors, who made society and culture possible. The August Ones, also known as the Three Sovereigns, are the god-kings who founded Chinese civilization. The Five Emperors are wise and morally perfect sages. They include the Heavenly Emperor Fuxi and his wife Nuwa, the first ancestors of humanity; the Earthly King Zhu Rong, who invented fire, which made the earth habitable; and the Human King Shennong, who invented farming. The most prominent among the Five Emperors was the Yellow Emperor, Huang Di, who invented weapons that allowed him to defeat the war god Chi You. This tale represents the victory of settled agricultural populations over neighboring **seminomads** who regularly raided China's earliest farming communities.

Another Chinese myth incorporated into Confucian, Daoist, and Buddhist traditions involves the Jade Emperor, the supreme divinity in Chinese folk religion. The Jade Emperor rules heaven and Earth assisted by a pantheon of divine civil servants. The members of the pantheon were humans who were made divine as a result of exemplary accomplishments during their lifetimes. This myth reflected and reinforced the Chinese practice of basing civil authority on merit, rather than **hereditary** entitlement.

The Eight Immortals also achieved exalted status by overcoming moral deficiencies such as drunkenness, dishonesty, and personal vanity during their lifetimes. Although they could not become gods, they resided at the Jade Emperor's court and could intervene on humanity's behalf to resolve seemingly lost causes.

The most prominent female divine in the Chinese tradition is Guanyin, the goddess of compassion and caring and a role model and **patron** deity for Chinese women. Guanyin especially supports the distressed and hungry, and gives comfort and aid to

The *Tale of Genji,* a mythical story from eleventh-century C.E. Japan, is often called the world's first novel. The scene depicted above shows Prince Genji, the story's hero, leaving the palace of his lover, Lady Fugitsubo. (Art Resource, NY)

the downtrodden. She has the ability to transform into any living creature to complete her task. She can help make women fertile, and is also concerned with the care of infants, especially newborns, who are particularly vulnerable.

EPICS

Throughout Asia, early oral myths evolved into oral epics that were eventually committed to writing. The most important of these stories describe the founding of the societies that produced them. As such, early epics conformed to the values and interests of the societal elite.

Japan, China, and Korea

Two early Japanese epic tales offer views into ancient Japanese elite society. Japan's *Tale of Genji,* often considered the world's first novel, captures the complexities of secluded court life in eleventh-century Japan. The *Tales of Heike,* written in the thirteenth century C.E., provides a view of court society in decay with its history of the Taira (Heike) family's fortunes in the Taira-Minamoto War of C.E. 1156–1185. This conflict marked the critical transfer of political authority from Japan's imperial court to the Kamakura Shogunate, a military dictatorship.

Korea's *Samguksagi* ("Chronicles of the Three States") and *The Legend of Tangun* (the history of the founding of the ancient Choson state in the twelfth century B.C.E.) are compilations of earlier tales. Like Japan's eighth-century *Kojiki* (*Record of Ancient Matters*) and *Nihongi* ("History of Japan"), they were intended to provide the ruling families of Korea and Japan with distinguished ancestral histories. The thirteenth-century Koreans went further in their epic study of *King Tongmyong* (C.E. 1168–1241), which reviews the founding of Koryo sovereignty.

China's earliest known epic was the fourteenth-century C.E. *Romance of the Three Kingdoms,* which recounts the fall of China's Han **dynasty** and the period that followed (C.E. 150–280). The text is a window into the Chinese past, a commentary on Chinese political philosophy, and ultimately a reflection on politics in the Yuan **era** (C.E. 1279–1368) during which it was written. All Chinese knew the main characters of the tale. Cao Cao, the founder of the post-Han Wei regional state (C.E. 220–265) is the classic arch villain. The three early heroic champions of the rival Shu state (C.E. 221–265) are Liu Bei, who fights to uphold the traditions of the past, and his able and loyal generals Zhuge Liang, who defeats the evil Cao Cao, and

LINK TO PLACE

Asian Creation Myths

Asian myths typically explain that humans came into existence by the actions of a god or gods that established a continuing bond between the world of humanity and the world of the divine. They also indicate that the creator established a **hierarchy** in which humans exist below the gods and other supernatural beings but above animals and plants. The societies that created these myths applied this idea of order and hierarchy to human relations; most ancient Asian cultures were marked by strict social **stratification**.

One of China's several creations myths is representative of those of other Asian civilizations in its explanation of an original source of human existence. In this tale, which was incorporated into Chinese writings by the sixth century B.C.E., Pan Gu was the first living thing. He evolved from a giant nurturing cosmic egg, which contained the opposing forces of *yin* and *yang*. Yin and yang fell from the egg, and yin formed the earth and yang the sky. When the egg hatched, Pan Gu became the source of the third element of the trinity of earth, sky, and humankind.

Japan's origin myth, which appears in an eighth-century C.E. Japanese chronicle collection, differs from the Chinese myth in that the earth and sky are deities of different sexes—male sky and female earth—which produce human offspring. Instead of yin and yang, the sea is said to be the creative source of energy that made human existence possible. In the Japanese creation myth, the god Izanagi and goddess Izanami stir the waters of the earth to produce the island of Okonoro, from which they later create the Japanese islands. The divine couple then populates the islands with their many children, including the sun goddess Amaterasu, from whom descended the emperors of Japan.

Guan Yu, who was deified as Guan Di, the Chinese god of war.

India

India's greatest epic is the *Mahabharata,* which tells of a civil war that took place in the Vedic age (ca. 1600–800 B.C.E.). The Pandava brothers, who emerge victorious over their rivals, the Kaurava, represent the various personalities of humankind and stand as models for appropriate human behavior. One brother, Yadhisisthira, is pious, righteous, and gentle, but a little negative in character. Bhima is physically imposing, rough, and gluttonous, but very intelligent. Arjuna is the great warrior—principled, generous, and brave. Notable narrative episodes tell legends of the Indian gods, as well as stories that serve as commentaries on proper and improper behavior.

The *Ramayana,* a symbolic story about rightful human conduct dating to about the third century B.C.E., is just as significant to Indian epic literature as the *Mahabarata*. The *Ramayana* focuses on Rama, a prince who slew many demons that had been attacking local villagers. To avenge his fellow demons' deaths, Ravana, the demon king of Lanka (Sri Lanka), kidnaps Rama's wife, Sita. Rama and his brother, Laksmana, ally with Sugriva, the king of the monkeys, and his general, Hanuman, to find Sita. After tracking Sita to Ravana's palace, Rama, Laksmana, Hanuman, and their army of monkeys kill Ravana and his followers and rescue Sita.

Although Ravana had not mistreated or even touched Sita, Hindu sacred law forced Rama to refuse Sita as his wife, because she had lived with another man. In anguish, Sita threw herself on a funeral pyre (a fire built to burn the bodies of the dead, following Hindu custom). This act was expected of loyal wives, who sacrificed themselves to join their deceased husbands in the afterlife. In Sita's case, however, it was as an act of penance to cleanse herself of her perceived wrongdoing. The fire-god Agni, however, refused to accept her self-sacrifice and Sita lived. Interpreting this as a sign of

Sita's innocence, Rama and Sita renewed their marriage vows and returned to Ayodhya to righteously rule as king and queen. The tale was written as a critique of the unintended consequences of strict Brahmanical law.

The *Mahabharata* and *Ramayana* epics were models for other south Asian regional epic literature, as well as for the localization of these epics into the language and cultural traditions of Southeast Asia. The most notable of these local efforts are the Javanese *kakawin* epic poems from the eleventh through the fifteenth centuries C.E., which retell the Indian classics in the Javanese language and a Javanese setting.

See also: China; Confucianism; Hinduism; India; Japan; Java; Korea; Language and Literature; Mandate of Heaven; Shinto.

FURTHER READING

Creese, Helen. *Women of the Kakawin World: Marriage and Sexuality in the Indic Courts of Java and Bali*. Armonk, NY: Sharpe, 2004.

Davis, Edward L. *Society and the Supernatural in Song China*. Honolulu: University of Hawaii Press, 2001.

Tambiah, Stanley J. *Magic, Science, Religion, and the Scope of Rationality*. Cambridge: Cambridge University Press, 1990.

New Zealand

Southern Pacific islands located southwest of Australia that were settled between the twelfth and fourteenth centuries C.E. by migrating populations from Polynesia known as Maori. New Zealand is known by its native population as Aotearoa, literally "land of the long white cloud."

EARLY SETTLEMENT

New Zealand's earliest known settlements date to the Archaic Maori **era**, which began around C.E. 750. At this time, Polynesian settlers of unknown origin lived on New Zealand's South Island. Archeological evidence and local legend suggest that these earliest settlers depended on hunting the moa, a now-extinct flightless bird that was as large as four feet (1.2 m) tall and grazed on the open grasslands of South Island. The largest populations of this moa-hunting people lived in camps along the eastern coast of the South Island. According to Maori legend, the earliest inhabitants of South Island eventually killed off the moa bird population, forcing the settlers to maintain their settlements close to the coast, depending primarily on the sea for their survival. Later, as confirmed by archeological evidence, other Archaic Maori became fishermen on the North Island's western coast around Mount Taranaki.

According to Maori mythology, the adventurer Kupe led a tenth-century expedition to New Zealand in double outrigger canoes from the Maori homeland, which most scholars identify as the Society Islands of the southern-central Pacific. Legend holds that Kupe found the island uninhabited. The beginning of the larger and more well-attested Maori migration occurred during the twelfth century, led by the legendary chief Whatonga and his grandfather Tai.

Archeological discoveries confirm kernels of truth in these legends, such as evidence of short-term tenth-century Maori settlements in the Bay of Islands on New Zealand's northern tip, and evidence of gardening at Urimatao on Moturua Island. However, other than these sites, there is little evidence of settlement on the North Island until the twelfth century C.E. The best archeological evidence suggests that the first group of voyaging Maori populations arrived in the twelfth century and settled the Dargaville area on the North Island's western coast. From there they moved farther south, building fortified villages at Rawhiti and Manawaora.

In this period, known as the Classic Maori age, Maori left the coasts to settle the interior. New food crops were introduced, notably taro, yams, and gourd, but especially *kumara,* a variety of sweet potato and the only tropical plant to flourish in New Zealand's cool climate. According to local legend, the Polynesians brought the kumara to New Zealand from their original island homeland.

LINK IN TIME

Maori Culture: Ancient and Modern

The centerpiece of a Maori community is the *marae,* or meeting ground, where a range of activities takes place according to traditional practices. These celebrations include funerals, weddings, tribal reunions, and an annual cycle of other rituals. The marae, which symbolizes group unity, normally consists of an open grassy area in front of a large, carved wooden meetinghouse.

Community elders manage the marae, where they pass along group traditions and cultural practices to the young by teaching oral folktales, songs, and the traditional arts of weaving and woodcarving. Among the most important lessons taught at the marae is distinction between *tapu,* that which is sacred, and *noa,* that which is held in common. A person, object, or place that is tapu may not be touched or even approached except according to specific rules and prohibitions. By tradition, community members of lower rank may not touch the tapu objects of those of higher rank, as those of higher birth may not touch the tapu belongings of those in the lower ranks. If a person of low status touches the glass of a higher-ranking person, for example, the drinking vessel must be destroyed.

Some objects, for example, a ritual basket, a water vessel, or a sacred axe, are so tapu that they are considered dangerous to all except qualified priests. In previous times, failure to honor such an important tapu would pollute the sacred object, place, or person and was punishable by death. To not honor such tapu offended the gods and was sure to bring negative societal consequence. Noa, however, are free of such prohibitions, and are available to all regardless of rank, as common community property.

As the new crops took hold, societies gave up their **nomadic** camp culture and unfortified villages, and began to build fortified settlements. They also developed an efficient underground storage system that allowed them to harvest the fragile kumara tubers before the first frost and allow them to ripen during the cold winter months. Stored crops fed the local population in the winter, and the surplus was replanted in the spring. Some successful groups began to live in unprotected villages, whereas others continued to occupy strongly fortified villages.

The final settlers from Polynesia landed in the Bay of Islands area in the late fourteenth century, where they intermarried with the established Maori settlers. By the time the first Europeans arrived in the late sixteenth century C.E., most Maori lived on the tropical North Island's northern coastline. Today, most Maori live on the North Island, representing 14 percent of New Zealand's total population.

CULTURE

The great diversity among Maori ancestral arts, crafts, languages, and ways of life reflects cultural differences related to geographical isolation and the varied dates at which the settlers arrived. These differences find expression principally through the distinction between northern and southern Maori culture. For example, while there is a single Maori language, there are separate northern and southern Maori dialects, and nine known regional variations of the northern dialect.

Maori community life centered on a yearly cycle of group performances and rituals held at local meeting grounds, which symbolically bonded individuals to the local community. Community assemblies convened inside a large wooden hall adjacent to the meeting grounds, where speeches, songs, recitations of Maori myth, and ritual processions took place. These proceedings frequently ended in gift exchanges between the meeting hosts and their guests, acknowledged by a ceremonial touching of noses, and a concluding ceremonial sharing of food.

Maori religion is based on Polynesian myth, which explains that humans and every other aspect of nature are descended from Sky Father and Earth Mother. There was a subsequent competition between two of

Maori culture dominated New Guinea before the arrival of European settlers in the eighteenth century C.E. and is still evident today. The façade on this church on the North Island is carved and painted in traditional Maori fashion. (Robert Francis/Robert Harding World Imagery/Getty Images)

their children, the fierce Tumatauenga (god of war), and his wise brother Tane Mahuta (god of the forest), who ultimately prevailed. Tane Mahuta's son Maui eventually "fished Aotearoa up" from the sea (a symbolic explanation for New Zealand's volcanic origin).

Archeological evidence demonstrates that there are elements of truth in the symbolic Maori creation myth. The Archaic Maori lived in fortified villages, as protection against their neighbors. Later arrivals, by contrast, lived in unfortified villages. Maori understand this archeological evidence as demonstration that the earliest inhabitants were in agency with Tumatauenga, the destructive god of war. In contrast, the new arrivals were committed to the wise Tane Mahuta; they eventually prevailed and thereafter both groups of Maori learned to live in peace.

See also: Polynesia.

FURTHER READING

Belich, James. *Making Peoples: A History of New Zealanders from Polynesian Settlement to the End of the Nineteenth Century.* Honolulu: University of Hawaii Press, 1996.

Patterson, John. *Exploring Maori Values.* Auckland, Australia: Dunmore Press, 1992.

Pax Sinica

Political time, influential in pre-1500 Asia, when it was thought that the success and prosperity of the Asian continent depended on the existence of a strong and stable Chinese ruling **dynasty**. The rise of dynastic authority in China during the Han dynasty (206 B.C.E.–C.E. 220) coincided with increased prosperity throughout Asia. When Chinese dynasties fell, or during extended periods without strong dynastic authority, Asia tended to experience local economic difficulties and political strife.

Nineteenth-century Western scholars coined the term *Pax Sinica* to compare the periods of stable Chinese rule with the *Pax Romana* ("Roman Peace") established in the early years (29 B.C.E.–C.E. 180) of the Roman Empire. During the *Pax Romana,* Roman law and civic culture spread throughout the empire, helping to unify and pacify a diverse population of conquered peoples. Similarly, scholars believed, the Han dynasty united the diverse regions of China under its imperial rule, and used China's powerful political and economic base to impose its will on its neighbors. Like the Romans, the Chinese were able to maintain control with the threat of military force; subject populations were unwilling to challenge a well-armed, well-trained army. This threat formed the basis of the Chinese Tributary System.

Under this system, populations not directly subject to Chinese authority (such as those in Korea or Vietnam) were expected to send regular embassies to present tributary gifts—samples of local products that might be of interest to the Chinese—to the Chinese emperor. The emperor, in turn, presented the ambassador with a gift that symbolized Chinese approval of the local ruler's sovereignty. The ruler displayed the gift to his subjects as a public demonstration of the emperor's support.

Certain expectations accompanied imperial approval, notably that the ruler who gave **tribute** would ensure peace and stability in his realm in order to encourage peace among his neighbors. China also expected regular trade with tributary states. Exotic foreign products such as spices, aromatic woods, cotton **textiles**, jungle birds, and medicinal items were important markers of status in China and thus the foreign trade supported the luxurious lifestyle of China's elite. Just as importantly, mandatory foreign trade occurring at Chinese ports provided a vital source of government revenue.

The fall of the Han dynasty brought a drop in international trade, significant economic disruption, and political destabilization to Asia. The return of long-term Chinese dynastic authority under the Tang (C.E. 618–907) and Song (C.E. 960–1279) led to a prolonged period of economic and political growth throughout the region. The resumption and expansion of trade paved the way for development of an international communication network that brought the Buddhist faith to China. The newly converted Chinese authorities made their realm a center of Buddhist worship and scholarship.

The **era** of the *Pax Sinica* also witnessed the spread of Chinese Confucian culture to neighboring Japan (C.E. 710), Korea (C.E. 935), and Vietnam (C.E. 960), where the Chinese political system became the basis for successful local **monarchies**. Even the "barbarian" Mongol emperors during the Yuan dynasty (C.E. 1279–1368) adopted established Chinese political and cultural systems and success-

fully managed an empire that extended from China to the Mediterranean Sea.

The rulers of the Ming dynasty (C.E. 1368–1644) offered an even greater possibility of peace and prosperity in the early fifteenth century. At this time, well-armed Ming fleets sailed to the Middle East and Africa to eliminate piracy and other local threats to the vital Indian Ocean **maritime** trade route. The Ming withdrew from these overseas voyages in the 1430s to refocus their military spending on securing their northern borders against the raids of threatening central Asian steppe populations. Thus, when cannon-bearing Portuguese and Spanish ships entered Asian waters in the early sixteenth century they had no initial opposition, and their aggressive use of gunpowder to assert their economic interests marked the final end of the *Pax Sinica*.

See also: Indian Ocean Trade; Japan; Korea; Melaka; Mongols; Silk Road; Spice Trade; Vietnam; Zheng He.

FURTHER READING

Chang, Chun-shu. *The Rise of the Chinese Empire: Frontier, Immigration, and Empire in Han China, 129 B.C.–A.D. 107*. Ann Arbor: University of Michigan Press, 2006.

Hardy, Grant, and Anne Behnke Kinney. *The Establishment of the Han Empire and Imperial China*. Westport, CT: Greenwood, 2005.

Polynesia

Stretching from New Guinea east across the Pacific, a widely scattered group of islands that were populated by seagoing people with roots in Southeast Asia. After migrating from mainland Asia sometime before 10,000 B.C.E., some Polynesians left New Guinea around 1500 B.C.E. They traveled first to the Solomon Island chain, then to the Banks and Vanuatu **archipelagos**, and eventually as far east as Samoa and Hawaii. The name Polynesia refers to the shared cultural heritage of the islands, rather than any geographic or political unity among them.

Archeologists estimate that it took hundreds of years for the Polynesian migrants to reach the easternmost islands, some 2,000 miles (3,200 km) from their starting point off New Guinea. Hawaii was settled about C.E. 400 to 500, Easter Island about C.E. 400, and New Zealand about C.E. 1100–1200. Samoa, Fiji, and Tonga seem to have had special roles as the strategic points for the later voyages of migration, as they are mentioned in local traditions as points of origin.

Except for the sweet potato, all of the crops and domesticated animals of Polynesia (taro, bananas, yams, breadfruit, sugar cane, pigs, dogs, and chickens) came from Asia. Even the sweet potato likely was brought from its native South America by sojourning Polynesians. Scholars agree that the voyagers brought these foods with them, indicating that the goal of their trip was settlement, not simply random exploration.

The Polynesians navigated the Pacific in ingeniously designed and built double-outrigger canoes. These vessels consisted of two hulls connected with lashed crossbeams and covered with a central platform. Although referred to as canoes, these vessels were wind-driven, using sails made of natural fiber matting. The two hulls gave the craft greater stability and resiliency in the open ocean, as well as the capacity to transport people and supplies over long distances. A medium-size boat, 50 to 60 feet (15 to 18 m) long, could accommodate two dozen people and their belongings, including plants and animals to introduce on the new islands they settled.

Polynesian culture is based on family bloodlines and ranking of the different branches of ancestors. Rank often is related to previous islands of residence, and favors the earliest settlers over those who arrived later. Polynesians have a unique

animistic religious outlook, in which sea creatures, birds, and the heavens are vital spiritual forces. The Polynesians view these oceanic creatures as having protected and guided the migrating voyagers in their travels. Polynesian religious tradition also celebrates a divine brother and sister, Ru and Hina, who navigate the earth to locate new islands for settlement. The sister, Hina, is said to remain as the moon, guiding voyagers across the ocean.

Today's Polynesian society and culture resulted from the mixing of populations and cultures over the centuries. These cultures and languages, which developed locally rather than being transplanted from Asia, commonly emphasize movement, heroic voyages of discovery, and observation of natural signs such as the stars and ocean currents.

See also: Micronesia; New Zealand.

FURTHER READING

Bellwood, Peter. *Polynesians: Prehistory of an Island People*. London: Thames and Hudson, 1987.

Campbell, Ian C. *History of the Pacific Islands*. Berkeley: University of California Press, 1990.

Irwin, Geoffrey. *The Prehistoric Exploration and Colonization of the Pacific*. Cambridge: Cambridge University Press, 1994.

Religion

Although drawn from a wide variety of local sources and traditions, ancient Asian and Pacific religions have long coexisted and influenced one another's beliefs and practices. Ancient practitioners of Hinduism, Buddhism, Confucianism, Daoism, and Shinto existed alongside one another as have followers of **animist** religions and ancestor worship cults. As a result, traditional beliefs about humankind's relationship with the spirits of the natural world occupy a central role in several major Asian religions.

Although similarities exist, this intermingling of **indigenous** religious beliefs throughout ancient Asia led most of the major religions of the region to develop several different forms, or schools of thought, with varying beliefs and practices. Faiths such as Hinduism and Shinto, which had no single founder, grew from an accumulation of beliefs and show significant regional variation. Even Buddhism, although based on the teachings of Siddhartha Gautama (ca. 563–483 B.C.E.)—the Buddha, or "enlightened one"—split into three major schools. In most places, local cultural notions shaped the form of the religion.

ANIMISM

Traditional Asian animism was based on local belief in spirits that populate the realms of nature and humanity. These spirits are revealed in dreams, trances, and a variety of supernatural experiences, including human encounters with ghosts or other spiritual presences. For example, ancient agricultural cults among the village sites of northern China's Yangshao culture (ca. 5000–2000 B.C.E.) assigned a special role to the spirits of the soil, plants, and weather, as well as to local guardian spirits associated with sacred rocks, trees, or sources of water. Local agricultural productivity was believed to result from a partnership between humanity and the spiritual forces of the natural realm. Similar beliefs were popular among the Jomon culture (ca. 10,000–300 B.C.E.) of Japan during the same time period.

Adherents of animistic faiths believed that spirits could flow from one realm of existence to another in ways that humans could not. Humanity occupied a middle realm between supernatural forces that inhabited both the darker regions below the earth and the **celestial** realms above it. Spirits that dwelled below the earth, such as fertility spirits, could be benevolent; others were potentially dangerous evil forces. Those who lived above the earth were generally beneficial to humans. In animist belief, humans cannot eliminate evil spirits but they can perform rituals to appease them.

Animistic "cults of the soil" were well established in India and China at the time settled agricultural communities appeared in both areas about

2500–1800 B.C.E. In these cults, a chief or priest served as the intermediary between the earth deity and ancestor spirits on the one hand and the human community on the other. This intermediary performed rituals and sacrificial offerings of food, animals, and even humans (slaves or war captives) to assure the fertility of livestock and crops and the general good fortune of the community. Prosperity was not seen as the product of human labor, but as the work of the gods. Economic productivity was thus the consequence of healthy relationships between humans and supernatural forces.

CHINESE ADAPTATIONS

In China, Daoism drew heavily on animistic ideas to promote harmonious coexistence between humans and nature. Lao Tzu, a semimythical scholar from the sixth century B.C.E., traditionally is credited with writing the founding text of Daoism, the *Tao te Ching,* although various authors likely produced the work over a period of many years. Daoism is based on the Dao, or "way of nature," a supreme natural force that produces and nurtures everything in the universe. Daoist teaching looks to nature for examples to illustrate its concepts and stresses that all living things, including humans, should strive to live in harmony with the Dao.

Confucianism, meanwhile, embraced traditional Chinese worship of ancestral spirits but redirected the focus to the world of the living. In Confucianism, observing correct familial relationships is seen to be key to an orderly and healthy society. This includes not only honoring deceased ancestors but also paying proper respect to parents and other living family elders. In broader society, this translates into respect for one's social superiors, particularly government officials. However, Confucius (Kungfutzu, 551–479 B.C.E.) believed that societal leaders should be selected on the basis of merit, rather than on the basis of wealth or noble birth. He advocated opening the Chinese civil service to all qualified applicants.

The Confucian state eventually appropriated many aspects of Chinese animistic faiths into a state cult, with the emperor serving a priestly role as supreme intermediary between ancestral spirits and humanity. Local government officials erected over 2,000 temples to Confucius after Confucianism became the state religion in 206 B.C.E. Imperial officials assumed roles as religious leaders in an attempt to focus religious practice on the state and its representatives.

INDIAN RELIGIOUS TRADITIONS

In India, Hinduism emerged as a result of the mixing of Vedic influences from central Asia with existing Indian animistic beliefs. The Aryan **nomads** who entered India about 1600 B.C.E. practiced a faith centered on the worship of male ancestors, and these ideas merged with Indian worship of female fertility spirits. For example, the stone *linga,* or male phallus, was portrayed united with the female vulva as the focal object of ritual fertility celebrations in animistic pre-Hindu India. Under Hinduism, these local divinities were transformed into universally powerful gods and goddesses. The linga, for example, came to symbolize the Vedic god Siva, who oversaw the realms of agricultural fertility and human health.

Hinduism did not develop a single tradition, however, and various strains of belief developed as a result of debate about the earliest Hindu texts, the *Rig Veda*. Although most Hindus acknowledge the ultimate authority of the *Rig Veda,* few Hindu sects base their ideas solely on its teachings. Most Hindus, for example, worship a **pantheon** of gods, while others practice **monotheism**, and some are even atheists. Local customs and culture shape individual beliefs about which god or gods to worship, which ritual practices are the most important, and how much social freedom is accorded to females.

Unlike Hinduism, Buddhism does not draw its inspiration from existing animist beliefs; however, it does not prohibit its followers from practicing animism. In fact, Buddhism is unique in that it allows its followers to worship any god or set of gods they choose. The goal of the Buddhist believer is to seek ultimate truth; how one achieves that goal is considered relatively unimportant. As a result, an individual who sacrifices to Hindu gods can be a practicing Buddhist as can one who worships at a Shinto shrine or one who ritually honors deceased ancestors. This tolerance and inclusiveness helped Buddhism spread widely throughout Asia after its founding in the fifth century B.C.E.

TURNING POINT

Reincarnation

In Hinduism, reincarnation is believed to be the process of rebirth after death in another form. According to ancient religious tradition, reincarnation is a result of improper action during life, action that makes one's self or "soul" too impure to unite with the ultimate divine creative force, or *brahman*. Improper action is defined as concern for self over the common welfare of humanity, exemplified by actions such as incorrect thought, touch, sight, passion, material gluttony, or abuse of others.

Because of these sins, the polluted soul assumes various forms of life, human as well as animal, in a series of rebirths determined by one's accumulated negative actions over previous lifetimes. Release from the cycle of rebirth can be achieved only by giving up sinful behavior and committing the remainder of one's life to nonmaterial pursuits, such as disciplined meditation, which might lead to even higher levels of purity. India's Jain religion, founded in the sixth century B.C.E., goes beyond the Hindu tradition, proclaiming that rebirth is not limited to humans and animals, but might also take place among inanimate objects. Thus, a stone may represent a being that has a heavily polluted soul.

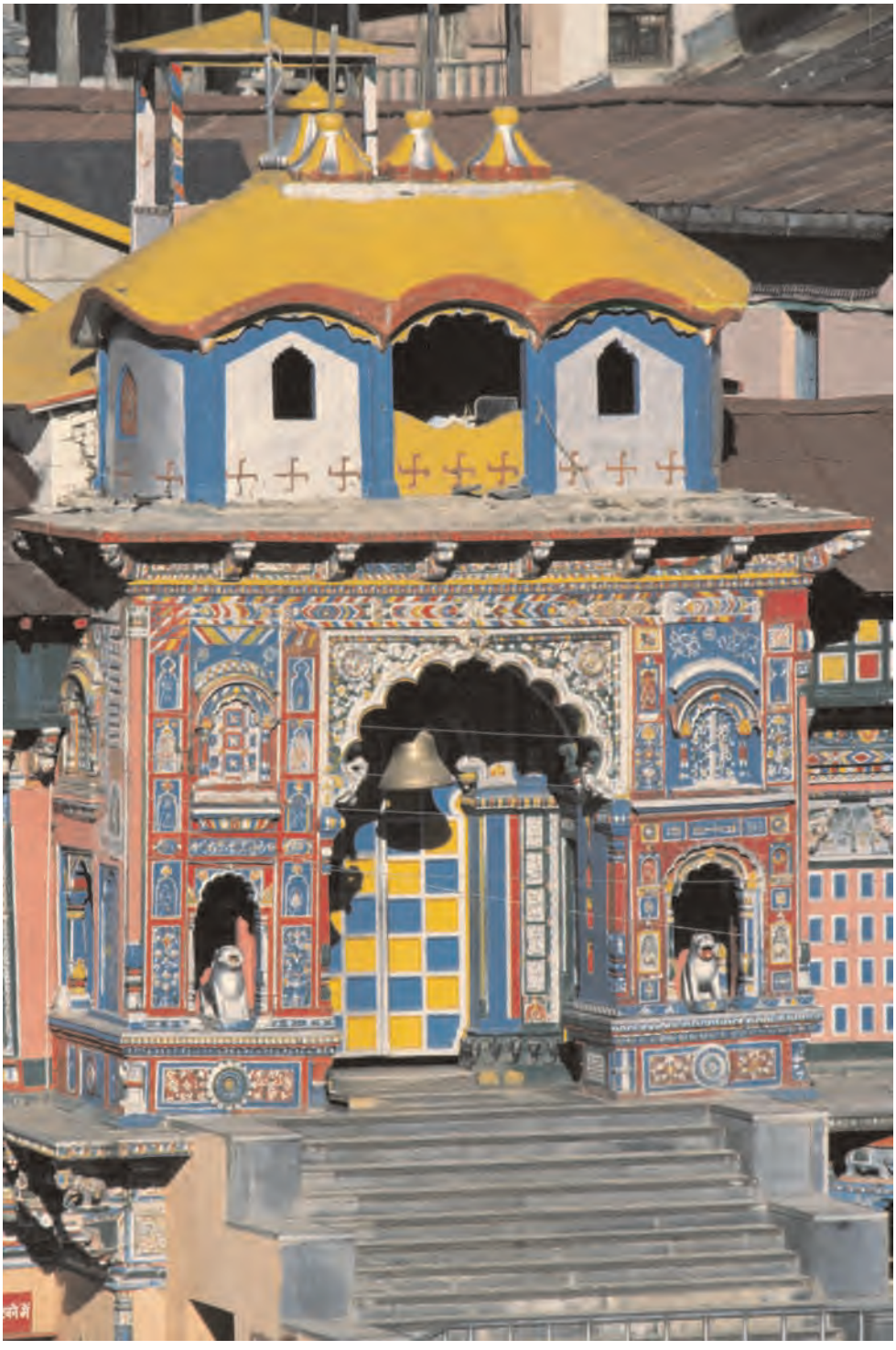
Unlike Hinduism, Buddhism discounts the notion that a human personality passes on to a new existence at death. According to the Buddhist view, at death the soul carries only the accumulated sins of past lifetimes; one's individual personality ceases to exist and is not retained in the next rebirth. Later followers of Hindu and Buddhist religious traditions softened the ancient notion of reincarnation by suggesting that ancestral spirits eventually go on to an afterlife in a spiritual "heaven" as a reward for a lifetime of moral and devoted service to a divine being and humanity.

The earliest form of Buddhism, called Theravada ("the teaching of the elders") strictly follows the Buddha's words, but later versions of the faith stray farther from the original teachings of the Buddha. Mahayana ("the great vehicle") Buddhism, which arose in the second century B.C.E., is more concerned with replicating the Buddha's experience of enlightenment and focuses less on close adherence to his words. Mahayana Buddhism found acceptance throughout China, Japan, Korea, and Vietnam, while Theravada Buddhism thrived mainly in India, Sri Lanka, and Southeast Asia. A third wave of Buddhism, Vajrayana, developed at Nalandia in India and spread to Tibet, Java, and China in the seventh century C.E. It emphasizes the power of rituals and sacred objects.

ISLAND CULTURES

As in most regions of Asia, Japan's earliest religious cults featured animistic beliefs, and these eventually evolved into the Shinto religion. Shinto is based on the worship of *kami,* or spirits, that are believed to inhabit all things in nature, both living and inanimate. Trees, bodies of water, and even stones have a kami; deceased humans also become kami and are to be honored by their descendants. By about the third century C.E., the Japanese imperial family began to claim descent from the Shinto sun goddess Amaterasu. After that time, the religion became a state cult of which the emperor was the ritual head.

Although the seas surrounding Japan effectively protected the islands from military invasion, they did not prevent the inflow of new religious ideas from mainland Asia. In about C.E. 538, Buddhist monks made their way to Japan, bringing their faith with them. Although the imperial court rapidly adopted the new faith, most Japanese still practiced Shinto or earlier animist religions. The court thus felt the need to reconcile the apparent differences between Shinto and Buddhism. In one explanation, the kami were considered to be supernatural beings who protect Buddhism and help spread its teachings. Other Japanese followers viewed kami as various manifestations of the Buddha.



Hinduism and Buddhism both spread across Asia from India, competing with and influencing one another for nearly 2,500 years. Although this temple in Uttar Pradesh, India is dedicated to the Hindu god Siva, its architecture shows that Buddhist influences and the shrine itself are sacred to followers of both faiths. (Martin Gray/National Geographic/Getty Images)

By this time, other Chinese creeds including Confucianism and Daoism had come to Japan, and worshippers found acceptance within Shinto. In the early eighth century C.E., existing Japanese myths and legends were compiled into accounts that introduced Daoist, Confucian, and Buddhist themes into Japanese religion. These works also were intended to support the emperor's claims to the throne, based on the imperial family's descent from the sun goddess, Amaterasu. Ultimately, Buddhist and Shinto principles were formally combined in *shinbutsu shugo,* a faith that was widely popular in Japan until the mid-1800s.

Australia and the Polynesian islands, even

TURNING POINT

Indian Temples and Temple Worship

Indian temples are sacred spaces normally dedicated to the ancient gods Visnu or Siva or to one of their alternate forms, or personalities, known as *avatars*. After entering a temple, the worshipper prepares to embrace the divinity by meditating on the numerous statues, stone carvings, and murals (or wall paintings). These images are intended to help worshipers recall sacred stories that portray the various personalities associated with the divinity and prepare them to proceed on their individual pilgrimages. Temple worship includes prayer at several supplemental altars, culminating in entry to the innermost shrine of the temple, where the worshipper encounters the temple's most sacred **icon** of the divine.

Temple worship is in part *puja*, or reciprocal exchange between the worshipper and the divinity. The worshipper normally makes a material offering, such as money or food, which is presented to the icon of the god. The god in theory "consumes" the offering and is then thought to be spiritually present to receive the prayers of the worshipper.

It is at this moment that the second aspect of Indian temple worship takes place, in which the worshipper internalizes and temporarily becomes one with the divine presence. In preparation for this moment, the worshipper clears his or her mind of all external thoughts. The worshiper focuses exclusively on the aspects of the divinity as those characteristics are portrayed in the temple **iconography** and statuary—the depictions of the god's hands and legs, the items in the god's hands, the posture and facial expression—all of which are associated with well-known oral and written religious traditions. According to long-practiced ritual, the worshipper also may intone a chant or hymn, ring a bronze bell, light a candle or oil lamp, or burn incense to assure a successful prayer.

more remote and inaccessible than the islands of Japan, developed their own animistic religions that dominated local religious belief until the arrival of European settlers in the 1700s. Practitioners of Polynesian animism viewed sea creatures, birds, and the heavens to be the spiritual guides and protectors of the original inhabitants of the islands, people who migrated from Southeast Asia about 1500 B.C.E. Polynesian religious traditions also feature divine human figures personified by natural or heavenly objects.

In Australia, animist beliefs varied among the 400 or so different indigenous language groups. While no set of beliefs was universal to all of these groups, their religions did share some core similarities. As with other animist cults, all of the Australian beliefs were centered on nature. Many heroes of Australian myth are animals, such as the serpent, that are common to Australia. Human spirits are also considered tied to the earth and the natural world and are associated with specific places. Indigenous Australians all believed in a mythical past called "the Dreaming" or "Dreamtime." During this time, no clear differences existed between humans and animals, and some spirits were thought to be capable of alternating between human and animal form.

ASIAN RELIGION, 1000–1500 C.E.

By the second millennium C.E., Asian religious practice consisted of many layers of different beliefs and practices. In eastern Asia, Chinese religion embraced and blended aspects of Buddhism, Daoism, Confucianism, and traditional ancestral animism. Korean worshippers mixed their unique animistic religious heritage with Chinese Buddhism and Confucianism. Japanese believers practiced the Buddhist and Shinto religions, both of which influenced one another and also embraced elements of Confucianism. In the remote Pacific islands and the Australian **archipelago**, traditional animism was still the sole religion.

In northern India after C.E. 1000, Islam began to gain a foothold, evident in people's adopting a policy of tolerance toward local Hindu and Buddhist

MAJOR ASIAN RELIGIONS BEFORE C.E. 1500

Confucianism, Daoism, Shintoism, Hinduism, various forms of Buddhism, and traditional animistic religions all characterized the beliefs and practices of the ancient Asian and Pacific Island peoples. From about C.E 600 to 1300, Buddhism was widely practiced throughout Asia, and Hinduism spread from India to Southeast Asia. After about 1300, some regions of Asia began to convert to Islam.

religious traditions. In this respect, Islam followed the pattern established by other religions, adapting to local conditions rather than imposing foreign beliefs by force. By C.E. 1200, Islam was making inroads into what is now Indonesia, and by C.E. 1500, it was becoming the most influential religion throughout most of the Indonesian islands. However, as in India, existing local religious traditions, including

Hinduism and Buddhism, remained strong. Although many local rulers adopted Islam as their official state religion, there is little evidence that Islamic influences displaced local cultural practices.

See also: Australia; Buddhism; China, Confucianism; Hinduism; India; Islam, Spread of; Japan; Korea; Shinto; Sri Lanka; Vietnam.

FURTHER READING

Bowker, John, ed. *World Religions: The Great Faiths Explored and Explained*. London and New York: DK, 1997.

Kitagawa, J.M., ed. *Religious Traditions of Asia*. New York: Macmillan, 1989.

Morgan, K. W. *Reaching for the Moon: Asian Religious Paths*. Chambersburg, PA: Anima, 1991.

Samurai

See Japan; Society; Tools and Weapons.

Sanskrit

See India; Language and Writing.

Shinto

Japanese **animist** religion dating from roughly 300 B.C.E. and based on local gods and the worship of nature. Shinto beliefs and practices have exercised a profound influence on Japan's culture, especially noted in the great reverence the Japanese accord nature.

Shinto, or "the way of the gods," reveres collective spirits, or *kami,* which are celebrated in traditional Japanese myth and ritual. A kami is the "spiritual essence" that in Shinto belief is associated with every natural object. All living creatures have a kami, as do specific places and objects of nature such as trees, rocks, bodies of water, and mountains. Upon death, all humans become kami as well. However, unlike the Western conception of divine beings, human kami are not superhuman or infallible; they coexist with humans and can experience human emotions and failings.

HISTORY AND DEVELOPMENT

Shinto developed as a collection of oral traditions that addresses the needs of humanity in this world—rather than being a guide to salvation in the afterlife. It had no single founder but evolved from the communal rites and symbolic expressions of ancient Japanese society. Kami were initially worshipped and presented with offerings at sites such as sacred rocks and outdoor altars. Since about the sixth century C.E., specific Shinto shrines became associated with local, individual kami. Among these was the shrine located at Izumo (C.E. 659), in western central Japan, honoring the deities of the Izumo family clan, and of Ise (C.E. 690), in eastern central Japan, honoring Amaterasu, the sun goddess, guardian deity of the Yamato imperial clan. Although Shinto does not rank the kami in any **hierarchy**, Amaterasu is one of the most widely worshipped kami because of her association with the emperor's family.

In the fifth and sixth centuries C.E., the Japanese imperial court adopted Buddhism and began to mix Buddhist and Shinto practices. It was at this time that Shinto first acquired its name, distinguishing it from Buddhism. Indeed, Shinto and Buddhism share a number of similarities. Neither religion believes in the existence of a supreme deity, and neither has a fixed set of **doctrines** that believers are expected to follow. Shinto is largely unconcerned with life after death. It stresses appreciation for life and living in harmony with the natural world rather than anticipating an afterlife. Similarly, Buddhism focuses on achieving a state of perfect peace and harmony with the universe during one's earthly existence.

The Japanese Shinto religion has its roots in traditional animistic beliefs involving nature and ancestor worship. Shinto shrines, such as this one on Japan's Honshu Island, feature a Torii, or gate, that symbolizes the barrier between the world of humans and the world of spirits, or *kami*. (Sylvain Grandadam/Stone/Getty Images)

In Shinto **cosmology**, the realm of the dead exists on the same plane as the human world that occupies the Japanese islands and the seas surrounding Japan. It also envisions three levels of gods existing above the earth. These beliefs were recorded in early Shinto works such as the *Kojiki* (*Record of Ancient Matters,* C.E. 712) and the *Nihon Shoki* (*The Chronicles of Japan,* C.E. 720), which identify certain kami as the guardian deities (*ujigami*) of each **aristocratic** Japanese clan. Japan's imperial Yamato clan, for example, derived its royal status from its privileged association with, and worship of, Amaterasu. The clan traced this association to Jimmu (ca. 711–585 B.C.E.), the legendary first Japanese emperor, who was said to have been directly descended from the goddess. According to the *Nihon Shoki,* Jimmu's grandfather, Ninigi, bestowed on his imperial successors the sword, mirror, and gem that became the sacred symbols of the emperor's authority.

Shinto became Japan's official state religion during the Meiji **era** (C.E. 1868–1912) and remained so through the end of World War II in 1945. Until this time, the Japanese worshipped their emperor as a god because of his divine bloodline. After Japan's defeat in World War II, Emperor Hirohito (1901–1989) publicly renounced his divine status. His successor, Emperor Akihito (r. 1989–), although no longer considered divine, remains the leading worshipper of the sun goddess on his society's behalf. The emperor worships at the sacred Ise Imperial Shrine on Japan's eastern coast, which celebrates the rising sun, thus, Japan is called the "Land of the Rising Sun."

RITUALS AND INFLUENCE

A Shinto shrine is usually simple and naturalistic in style, surrounded by tall trees or set in a mountain location. The shrines have water ponds, fountains, or streams, which are believed to cleanse the worshipper as well as the ritual site. Shinto shrines are framed by *torii,* simple open gateways to the sacred grounds. The focal center of a shrine is a sacred space framed by a large rope that symbolically holds the doors of the cave of the sun goddess open, preventing her from reentering and thus saving the world from eternal night. The shrine's altar may have a sacred object associated with the local kami, in which the kami may temporarily reside at the call of the worshiper.

Worship includes the clapping of hands or making other noise to summon the kami, which is followed by prayer and concludes with the offering of a small gift as a symbolic sacrifice. At some time during the year, a shrine will be the site of a community festival with a carnival-like atmosphere that celebrates the relationship between the community and the divine as the basis of continuing group success. Today, Shinto shrines remain the sites of personal appeals for divine assistance; community and patriotic celebrations; as well as traditional ritual places that mark certain life achievements.

Many Japanese **secular** cultural practices today trace their roots to Shinto belief. The importance Japanese place on observing proper forms of greeting or addressing others reflects the Shinto notion of *kotodama,* which asserts that words can have magical effects. The custom of removing one's shoes before entering a structure, and the use of wooden chopsticks as utensils, derive from Shinto's nature-oriented worldview.

See also: Buddhism; Japan; Religion.

FURTHER READING

Ellwood, Robert S., and Richard Pilgrim. *Japanese Religion: A Cultural Perspective*. Englewood Cliffs, NJ: Prentice-Hall, 1984.

Kasulis, Thomas P. *Shinto*. Honolulu: University of Hawaii Press, 2005.

Nelson, John K. *A Year in the Life of a Shinto Shrine*. Seattle: University of Washington Press, 1996.

Silk Road

Transcontinental caravan trade routes more than 5,000 miles (8,000 km) long that connected ancient eastern and western Eurasia beginning in the second century B.C.E. The Silk Road lay just north of the rugged Himalaya mountain range that separates India from China, central Asia, and southern Russia.

Westbound merchants on the route often began their journeys in China's northern capitals and traveled along a network of urban commercial centers in central Asia including Bukhara, Samarkand, and Tashkent in modern-day Uzbekistan. This portion of the route ended in northern Afghanistan, where the route split. One fork continued west to eastern Europe, another went south to India, while the main route went southwest through Persia (modern-day Iran) to Constantinople.

The portion of the route from China to central Asia developed first, by the second century B.C.E., in response to China's desire for central Asian jade. By 59 B.C.E., its extension to the West supplied the Roman elite with China's exquisite silk. The official opening of the route is attributed to the Han emperor Han Wudi (r. ca. 141–87 B.C.E.), who sent his envoy Zhang Qian and an army of 100 men to secure alliances with the central Asian Xiongnu and Yuezhi tribesmen (138–126 B.C.E.). Through the remainder of the Han **dynasty** (to C.E. 220), the tribesmen were well paid to keep the route open, but Han military outposts served to remind them who was in charge. When the Han dynasty fell, these tribesmen collected passage fees directly from the traders, as an alternative to seizing their goods.

Thereafter, the route was periodically secured when the lands at either end were governed by strong rulers in Persia and China.

The Silk Road reached its high point under the thirteenth-century Mongols, who had virtually conquered the entire territory from China to modern Turkey. Marco Polo, who traveled to China from Venice and back in the late thirteenth century, was one of many European merchants who benefited from Mongol stewardship of the Silk Road. In addition to bringing wealth to Europe, however, the Silk Road brought the Black Death, which spread from central Asian cities to Europe in the late 1340s.

The Silk Road was also an important avenue of cross-cultural exchange. Traders and travelers carried ideas and technology in both directions. It was the favored route of Buddhist pilgrims passing between China and India from the first millennium C.E., and of Christian and Muslim missionaries from the West who hoped to convert Asian populations in the second millennium. In the fifteenth century C.E., the volume of travelers on the route permanently declined. This was the result of several factors: the fall of the Mongol Yuan dynasty in China in 1368; the subsequent conversions to Islam among the post-Mongol hordes who controlled the overland passageway; and the opening of the ocean route between Western Europe and Asia in 1498.

See also: China; Golden Horde; Huns; Indian Ocean Trade; Islam, Spread of; Mongols; *Pax Sinica;* Spice Trade.

FURTHER READING

Boulnois, Luce. *Silk Road: Monks, Warriors, and Merchants*. Translated by Helen Loveday. New York: Norton (for Odyssey Publications, Hong Kong), 2006.

Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2004.

Slavery

Economic institution in which people are owned as property, must perform labor without compensation, and may be bought and sold at will. Different levels of servitude existed in ancient Asia. At one end of the scale were slaves who were wholly owned by another person and had no rights or personal freedom whatsoever. At the other end were several categories of bondsmen who enjoyed a measure of autonomy in their personal lives and occasionally rose to positions of power.

Both China and Japan distinguished among slaves, general bondsmen, and retainers. Bondsmen could serve as household domestic servants, agricultural laborers, and members of a military retinue. Technically, a Japanese *samurai,* or warrior, was a bonded client of his lord. In China, the eunuch corps, resident at the royal court and consisting of neutered males who were the military and bureaucratic bondsmen of the emperor, frequently wielded power in domestic politics.

A person might become a slave in several different ways. Criminals, especially those guilty of violent crimes, were enslaved as an alternative to execution. Prisoners of war often became the property of their conquerors. In some cases, societies fought wars to acquire slaves, especially in the largely underpopulated region of Southeast Asia, where additional manpower was essential to a society's well-being. There, war captives were usually placed in the military service of the conqueror, or resettled to develop previously uncultivated lands. Coastal Southeast Asia and southern Japan were well-known international slave trade marketplaces. Many of the humans sold there were captured by pirates in raids against shipping or agricultural communities in the China Sea.

Debt slavery was widespread in ancient Asia. Under this arrangement, an individual who could

not repay borrowed money was obligated to perform services for the lender until the debt was repaid. It was not unusual for parents of starving children to sell their children into bondage to save them from certain death. The concubine contract, for example, was a form of debt bondage in which a woman or girl served as the sexual partner of a higher-status man, but did not become his wife. Transfers of entire families and their lands to wealthy patrons was a common survival strategy. Servitude could become **hereditary**, as an individual who owned a family might at some time transfer their services to someone else as a gift, or to repay a debt.

See also: China; Japan; Society.

FURTHER READING

Lala, Kishori Saran. *Muslim Slave System in Medieval India*. New Delhi, India: Aditya Prakashan, 1994.

Reid, Anthony, ed. *Slavery, Bondage and Dependency in Southeast Asia*. St. Lucia, Australia: University of Queensland Press, 1983.

Watson, Rubie, and Patricia Buckley Ebrey, eds. *Marriage and Inequality in Chinese Society*. Berkeley: University of California Press, 1991.

Society

Most ancient societies in Asia and the Pacific region were distinguished by social class groupings, or **hierarchies**, intended to impose order on often diverse and mobile populations. In Confucian China, for example, the social order was defined by a highly educated and cultured bureaucratic elite, who earned positions by passing examinations and advanced by meritorious service rather than by right of birth. Indian society, by contrast, was based in the **hereditary** Hindu caste system, which defined every person's social rank and the codes of acceptable behavior appropriate to it. Ancient societies in Japan, Korea, and Southeast Asia were also organized according to hereditary rank and privilege.

PREHISTORIC CHINA

Archeological sites in northern China's Yellow River basin provide evidence of settled agricultural communities in Asia dating from 4000 to 1900 B.C.E. They also demonstrate the origin of later Chinese societal patterns. Each of these village sites is associated with the cultivation of millet (dry rice) and grain and demonstrates long-term commitment to residence at a single site rather than periodic migration. Houses were grouped in family units, clustered around a larger house of a headman or family clan elder, with a common open space for a variety of community gatherings. Moats or pounded earthen walls surrounded the villages, with burial grounds located outside the walls. The common features of these distinctive settlements and the patterns of their pottery suggest communication among early village communities.

Such early Chinese housing sites collectively demonstrate the importance of family as the basic work unit and source of personal identity. Differences in individual burial sites at these villages indicate that the inhabitants considered adults to be more important than children, and distinguished males over females. Adult graves were elaborate and located outside the village walls in designated graveyards; children's graves were simple and nearby the residences inside the walls. Burial goods (pottery, weapons, animal bones) found in the gravesites of significant males demonstrate some degree of social **stratification** if not the emergence of a male leadership elite.

The prominence of defensive fortifications at early village sites suggests that villages came into conflict with hunting and gathering neighbors. **Seminomadic** bands, who had a less reliable

ANCIENT WEAPONS

The Japanese Samurai Sword and the Javanese Kris

Weapons used in ancient Asia occasionally served both practical and ceremonial purposes. The Japanese *samurai* sword was one of the finest bladed weapons of any age, renowned for its strength and superior cutting ability, but also revered by owners as an integral part of their personal identity. A samurai wore both a long and a short sword, which he believed to be the "souls" of his warrior skills, and to which he gave individual names. This very personal association between warrior and weapon made it inappropriate to fight with the sword of a vanquished foe. The samurai believed that the soul of a sword could carry out retribution for the death of its original owner; even to possess the sword of a deceased samurai could be potentially fatal.

Like the samurai sword, the Javanese *kris* was a steel dagger that served as both weapon and spiritual object. The jagged-bladed kris was crafted by a blade smith, who was regarded to have magical powers that provided the blade with its "soul." Each kris blade was thought to have a life of its own. It was once considered a good idea for a new kris owner to sleep with the blade under his or her pillow. If the owner had a bad dream, the blade was considered unlucky and it was taken away; harmony, if not a spiritual bond, was essential between the owner and the kris. The spiritual power of the kris was so respected that some owners believe that carelessly pointing a kris at a person might cause that individual's death or bring other misfortune. To avoid this, the kris holder touched the tip of the blade to the ground to neutralize its negative potential.

source of food than did agricultural villagers, often raided **agrarian** settlements. The significance given to male burials and weapon artifacts found in many of the more elaborate grave sites suggests that the early societal elite played a significant role in defending the villages.

The importance of burial among these villages reflects a common concern with death and a basic sense of spirituality. Pottery remains in the burials are decorated with painted humans and animals, which are thought to symbolize early religious beliefs that acknowledged the importance of **animistic** and ancestral spirits.

SOUTHERN ASIA

South Asia's most spectacular early archeological sites are the remains of Indus Valley urban civilization (ca. 2500–1800 B.C.E.). The three most famous Indus civilization sites are Harappa in what is now the Pakistani Punjab, Mohenjo-Daro on the lower Indus river, and Kalibangan in modern Rajasthan. In addition, roughly 200 smaller town and village sites are scattered as far east as the Ganges and as far south as modern Bombay (or Mumbai). The civilization depended on the management of the annual floodwaters of the Indus River, produced by the melting snows of the Himalayas and the annual summer monsoons. Sophisticated water management allowed the society to cultivate substantial barley and wheat crops, and rice in its southern regions.

Indus Valley artifacts reflect standardization in the society's art forms. Its pottery and sculpted clay figurines include lifelike portrait statues of elite priests, as well as icons of fertility gods. A focus on order is also evident in urban architecture and city planning. City streets were laid out in an intersecting grid pattern, and the major thoroughfares had underground sewage systems. Residential districts composed of brick houses surrounded a public sector containing a few larger buildings, a ritual complex, a large public bath, granaries, and storehouses.

Historical interpretation and analysis suggests that Indus Valley society was organized as a **theocracy** led by an elite priesthood. Urban archeological sites are centered on a ritual complex that included municipal granaries, which stored surplus agricultural production from surrounding villages. In times of drought or famine, the priestly

elite redistributed surplus grain among the population. The unpredictability of the local environment gave rise to cooperative social structures that made group survival possible.

Despite its accomplishments, Indus Valley civilization did not endure. For unknown reasons, its cities declined around 1800 B.C.E. Aryan migrants who entered India ca. 1600 B.C.E. found its population dispersed among productive but decentralized rural communities.

INDIAN CASTE SOCIETY

The Indian caste system had its origin in the **hierarchical** Aryan *varna* system, which dates to 1600 B.C.E. In this system, *Brahmin* priests and teachers occupied the highest caste, followed by *Ksatriya* warriors and rulers, then the *Vaisya* (a commercial and professional "middle class"), and finally, *Sudra* (laborers).

Early Indian codes of acceptable social conduct were collected in the *Dharmasastra* Hindu sacred texts, which reached their final written form in the fourth century C.E. In the *Dharmasastra*-based system, local caste **hierarchy** was determined by moral and behavioral purity, which was displayed in everyday human conduct. Individuals were expected as much as possible to engage in *dharma,* dutiful service to society. By contrast, *artha,* or service to oneself, brought diminished stature, except when it was appropriate to certain professions, such as among merchants. *Kama,* behavior that was self-indulgent, usually involving the conscious exploitation of others, was sinful and socially unacceptable.

FAMILY, SOCIAL STATUS, AND MARRIAGE IN INDIA

In early Indian society, male children reached full adulthood when they married and had children. Normally, only the birth of a male child could validate adulthood and thus confirm a marriage. Girls were married outside the family and became adult members of their husband's families upon giving birth to a male heir.

Marriages were generally arranged, consistent with the needs and abilities of the family to pay wedding expenses or dowries. Dowries were gifts of money and/or other valuables normally paid by the bride's family to that of the husband. The husband's family reasoned that it was doing the bride's family a favor in taking her off their hands, thus the need for a dowry. Unmarried daughters were a social embarrassment, indicating that something was seriously wrong with the girl or that the family could not afford to marry her.

Marriages were confirmations of a family's status in the community; they also fulfilled an obligation to the family's ancestors to marry appropriately. Ancestor spirits become malevolent ghosts when they were alienated by the offense of an especially inappropriate and socially demeaning marriage. Marriages would ideally take place between two families of similar social or caste stature.

The *Dharmasastra* code dictated that a marriage could take place between families within two levels of one another in the local caste hierarchy. If a family was upwardly mobile, due to its improved economic or other socially important factors, it was important to convince a family of higher stature to take a bride (or groom) from them. For example, Indian merchants (*Vaisyas*) were always desirable marriage partners for cash-short *Brahmin* or *Ksatriya* elites. Merchants were held in low esteem by society because of their self-centered economic activity (*artha*) but were attractive marriage partners because of their wealth and the fact that their children were usually cultured and educated. Victorious warriors also might be of low social esteem, but their positions of power made them attractive marriage partners.

SOCIALLY ACCEPTABLE BEHAVIOR IN CHINA

China's social system was defined by duty, as expressed in the concept of *li,* propriety, or proper conduct. This meant submission to the group. In Confucian theory, innate goodness among humanity arose from societal order. Order brought about success; the consequence of disorder was failure. The key to order was qualified leaders, who maintained order by setting good examples or by forcing individuals to behave in a manner appropriate to their society's code of conduct. Leadership was justified based on experience. Age qualified one to hold power because in theory elders had more life experience than did the young. Previous success in

Hindu society is divided into four classes (Varnas) from the ritually purest (*brahmin*) to the least pure (sudra) and are the basis of the Indian caste system. Brahmin, such as the man shown in this picture, are considered spiritual leaders and are expected to perform extensive prayers and purification rituals to benefit society. (Robert Nickelsberg/Getty Images)

judging right from wrong was thought to ensure that the older leader would appropriately guide the younger dependent to become a good person.

Males generally dominated rather than females. This was not completely because of Chinese **patriarchal** bias, but because in theory the males had a wider range of societal interactions, and thus more experience than did the housebound female. Rank among male society was the consequence of holding a position of authority, such as being the head of a family, holding public office, or similar public leadership.

In the Chinese system, successful leadership was not based on authoritarianism but on discussions that ideally led to group consensus, implemented by the leader. In principle, participation in the decision-making process was healthy in that it brought differing opinions into the discussion. In addition, decisions in which everyone participated were more likely to be implemented. If no consensus was reached, the leader dictated what he thought was in the best interests of the group. Once any group decision was reached, every group member was expected to act in a manner consistent with that decision.

CHINESE SOCIAL ORDER

In China, the traditional social system placed the scholar-gentry class at the top. These were land-holding families in which at least one member of each generation had passed the Confucian civil service exams. These annually administered examinations tested one's understanding of the classical Confucian texts. They featured written essays in which the candidate had to apply his knowledge to resolve specified problems he might encounter as a public servant. Passing these exams was a prerequisite for government office, as well as confirmation of a family's literacy. Only those who demonstrated

literacy by passing the initial level of the exams could communicate directly with government. Thus, the literate were in a strong position to act as advocates on behalf of their dependents.

Below the scholar gentry in the Chinese social order were the peasants, considered loyal and settled dependent clients of the elite. **Artisans** were lower in rank: because their work was somewhat self-serving and they were potentially mobile, artisans were thought to be less likely to submit to the gentry's leadership. On the bottom of the social system were the merchants, whose interests were more focused on personal profit than on community service. They were the group least likely to follow the gentry's wishes, or to take on the acceptable lifestyle of the gentry. Social mobility might be achieved by marriage, or by passing the examinations, which were in theory open to all but in practice were limited to those who could afford to pay for their education.

THE WIDER ASIAN COMMUNITY

The Chinese social system was adopted in neighboring Korea, Japan, and Vietnam, with modifications relative to existing local cultural values. The Indian social system influenced societal development in Sri Lanka and Southeast Asia relative to notions of social behavior and ritual hierarchy but without the acceptance of the Indian caste system. Japan and several other Asian societies favored a household consisting of the nuclear family, in contrast to Indian and Chinese extended families, in which male relatives share a common household. In the Japanese nuclear family system, only one male in each generation succeeded his parents as head of the family household. Other males moved to homes on other family property or on frontier land that they would bring under cultivation.

In Southeast Asia, women traditionally had a higher degree of personal **autonomy** than was the case in the Chinese, Indian, and Japanese societies. This was in part the consequence of **matrilineal** and bilateral (equal value to both the maternal and paternal lines) family networks, in contrast to Indian, Chinese, and Japanese **patrilineal** systems.

See also: Archeological Discoveries; China; Confucianism; Hinduism; India; Japan; Korea.

FURTHER READING

Bellwood, Peter S. *First Farmers: The Origin of Agricultural Societies*. Malden, MA: Blackwell, 2005.

Bellwood, Peter S. *Prehistory of the Indo-Malaysian Archipelago*. Orlando, FL: Academic Press, 1985.

Ebrey, Patricia Buckley, and Peter N. Gregory, eds. *Religion and Society in Tang and Sung China*. Honolulu: University of Hawaii Press, 1993.

Inden, Ronald B. *Imagining India*. Cambridge, MA: Blackwell, 1990.

Spice Trade

Indian Ocean–based trade in spices, a system in existence by the first millennium B.C.E. Broadly, spices were rare items used in culinary, aromatic, and medicinal applications, with their medicinal value initially overshadowing their culinary use. Because virtually all spices were very expensive and imported in small quantities, only **aristocrats** could afford to buy them.

The most prized spices were pepper, ginger, cinnamon, turmeric, cardamom, cloves, nutmeg, and mace. The Spice Islands (in modern-day Indonesia), in Southeast Asia's eastern **archipelago**, were the source of the most valuable spices because cloves, nutmeg, and mace grew exclusively there. Cloves are the dried, unopened flower bud of an evergreen tree grown on five small islands in the Moluccas; nutmeg and mace are parts of the fruit of a rare evergreen tree native to the Banda Islands.

Borneo and Sumatra jungles were the source of benzoin and camphor barks, which were considered vital in preparations of Chinese medicines. Benzoin was also a demanded aromatic in Chinese

and Indian religious ritual, as were aloewood and sandalwood from Southeast Asia and frankincense and myrrh from the Arabian Peninsula and eastern coast of Africa. India's southwestern Malabar Coast was considered the source of the best pepper as early as Roman times; northern Sumatra pepper was a less expensive alternative after about C.E. 1000.

These commodities made their way from their point of origin to Eastern and Western markets via the Indian Ocean trade routes. The Strait of Melaka, separating the Malay Peninsula from Sumatra, was a key passageway from Southeast Asia to the western marketplaces of India and the Middle East. The South China Sea was equally important in the transit of spices from Java to Vietnam, China, Japan, and Korea. An alternative route from the Spice Islands to China passed through the Sulu Sea by way of the Philippines.

As the trade developed in the first century B.C.E., Indonesian seamen monopolized direct access to the sources of spice; India-based and Middle Eastern mariners were the most common in the western Indian Ocean. By C.E. 800, Middle Eastern seamen were sailing all the way to China. Chinese navigators participated actively in the spice trade after C.E. 1100, depending on the Chinese government's restrictions on the navigators' **maritime** activities.

Traders bought deck and cargo space from a ship owner or captain. The timing of their travels depended on the seasonal monsoons, with winds blowing from southwest to northeast from roughly June through August and then reversing to blow from northeast to southwest from December through March. Captains found themselves regularly laying over in a port, where they might take on wives and raise families, until the next monsoon season allowed their return voyage. Because it took two to three years to make the complete east-west passage, traders would specialize in one sector of the route. For example, a merchant might trade only between the Middle East and India, India and Southeast Asia, or Indonesia and China. In most ports of trade, both populations and trading activities fluctuated widely, depending on the seasonal travels of the merchants.

Open marketplace competition was the norm in the early spice trade network. Ports of trade competed to provide the most agreeable conditions; favored ports offered the security, products (whether their own or acquired from secondary marketplaces), and provisions demanded by the traders.

See also: Indian Ocean Trade; Melaka; Monsoons.

FURTHER READING

Dulby, Andrew. *Dangerous Tastes: The Story of Spices*. Berkeley: University of California Press, 2002.

Reid, Anthony. *Southeast Asia in the Age of Commerce*. 2 vols. New Haven, CT: Yale University Press, 1990, 1995.

Sri Lanka

Island off the southeast coast of India that became the international center of Theravada Buddhist scholarship in the second millennium C.E. and, from the beginning of the first millennium, was a critical step in the **maritime** trade network that stretched from eastern Asia to the Middle East. Ancient Sri Lanka was the exclusive global source of cinnamon, and also supplied pearls and black pepper to international traders.

By 900 B.C.E., aboriginal groups called Veddas were living in small urban settlements centered on Anuradhapura in the northern Sri Lanka dry zone and growing dry rice, or millet. In the sixth century B.C.E., Indo-Aryan Sinhalese from northern India migrated to Sri Lanka. According to the Sri Lankan Buddhist chronicle called the *Mahavamsa,* the Sinhalese conquered the Anuradhapura region.

By 300 B.C.E., the Sinhalese had developed an elaborate irrigation system consisting of water tanks (reservoirs) and irrigation canals that enabled

year-round cultivation in northern Sri Lanka. The remains of this early irrigation system are still impressive and once consisted of sophisticated valve pits (sluices) associated with massive dams and long-distance canals that crisscrossed northern Sri Lanka. In that same **era**, the Sinhalese converted to Theravada Buddhism, the oldest of the main Buddhist traditions. Buddhist monks and their monasteries partnered with Sri Lanka's Anuradhapura-based kings in the development of the critical irrigation systems. In C.E. 371, Anuradhapura became the home of a holy relic said to be the tooth of Siddhartha Gautama, the Buddha. The Buddha's Tooth Relic was smuggled to Sri Lanka from India at the initiative of the reigning king, and has since been the sacred symbol of political authority.

Anuradhapura, which became internationally famous for the massive *stupas* (dome-shaped towers that represented ancient earthen mounds used to cover relics of the Buddha) of its temples, remained the Sri Lankan capital city until C.E. 1000. At that time, invading Tamil Cola armies from southern India plundered the city and established a new capital at Polonnaruwa to the southeast. Sri Lankan forces retook the island in C.E. 1070, retaining Polonnaruwa as their capital. The Polonnaruwa-based state reached its height in the reign of Parakramabahu (r. C.E. 1153–1186), but by C.E. 1200 his realm had fragmented as southern Indian Tamils regained a foothold in Sri Lanka and began raiding their Sinhalese neighbors.

By the fifteenth century C.E., there were two new Sinhalese political centers, one at Kandy in the hills of central Sri Lanka (which remains the home of the Buddha's Tooth Relic) and the second at Kotte, inland from modern Colombo on the tropical southeastern coast, which was the center of Sri Lanka's international trade. Kotte eventually became the foothold from which the Portuguese extended their authority over the island after their arrival in C.E. 1505.

See also: Art and Architecture; Buddhism; India; Indian Ocean Trade.

FURTHER READING

DeSilva, K. M. *A History of Sri Lanka*. New York: Penguin Books, 2005.

Peebles, Patrick. *The History of Sri Lanka*. Westport, CT: Greenwood Press, 2006.

Sukhothai and Ayudhya

Centers of early Thai (Siamese) political development that eventually merged into a unified Ayudhya state (C.E. 1351–1767) that became the precursor of present-day Thailand. The territory brought under control by Ayudhya rulers in the late fourteenth and early fifteenth centuries C.E. remains roughly similar to the borders of the modern Thai nation.

EARLY HISTORY

Until C.E. 1238, the city of Sukhothai was part of the great Khmer Empire centered in what is now Cambodia. In that year, Thai chieftains Pho Khun Pha Muang and Pho Khun Bang Klang Hao declared their independence from the Khmer and established the Sukhothai realm in present-day northwestern Thailand. The rebellion marks the traditional founding of the Thai state. Sukhothai subsequently formed alliances with many smaller Thai states, such as the northern kingdom of Lanna, that were also arising in opposition to Khmer rule. By the late thirteenth century C.E., Sukhothai had conquered the western portions of the Khmer Empire and become a regional power.

Ayudhya was founded in the early eleventh century C.E. on the western edge of the Khmer realm. Originally part of a Thai kingdom based in the city of Lopburi, Ayudhya became the capital in C.E. 1350, when an outbreak of smallpox in Lopburi forced king U Thong (Ramathibodi; r. 1351–1369) to move his court. By this time, the former Lopburi state had

grown to challenge Sukhothai for political dominance over the Thai people. In the late fourteenth century, Ayudhya forced a declining Sukhothai to pay **tribute**. By the early fifteenth century C.E., the ruler of Ayudhya determined who sat on the Sukhothai throne. Ayudhya's King Trailok (Borommatrailokanat, r. 1448–1488) finally **annexed** the remnants of the Sukhothai kingdom in C.E. 1431.

POLITICAL CULTURE

Like the Sukhothai kings before them, the rulers of Ayudhya embraced Theravada Buddhism as the state religion. The aggressive and patronizing Theravada church, or *sangha,* evolved into a **hierarchical** network of monastic communities throughout the Thai realm that established close relations with the royal court. The ties between Thai **secular** and religious leaders were underscored by the construction of a central monastic and temple complex that was within the royal court. The Ayudhya state's political network, which depended on fragile personal alliances with small tributary kingdoms, was thus reinforced by the stable structure of the church.

By the C.E. 1460s, Ayudhya dominated the affairs of the upper Malay Peninsula. It shared in the regionwide prosperity that followed the establishment of the Melaka sultanate at the beginning of the fifteenth century. Ayudhya annexed the Tenasserim (1460s) and Tavoy (1488) regions on the northwestern Malay Peninsula, which provided it with direct access to the international trade of the Bay of Bengal and the Indian Ocean. The Ayudhya realm continued to prosper until raiding Burmese forces destroyed its capital in C.E. 1767.

See also: Buddhism; Indian Ocean Trade; Khmer Empire.

FURTHER READING

Lieberman, Victor. *Strange Parallels: Southeast Asia in Global Context, c. 800–1830*. Cambridge: Cambridge University Press, 2003.

Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*. Vol. 1. Cambridge, MA: Cambridge University Press, 1991.

Wyatt, David. *Thailand: A Short History*. New Haven, CT: Yale University Press, 1984.

Technology and Inventions

Asian scholars and inventors prior to C.E. 1500 far outstripped their European contemporaries in most areas of technological progress. Innovations that were pioneered in Asia often did not appear in the West until hundreds of years later.

AGRICULTURE AND INDUSTRY

The Chinese developed the ox-drawn plow in about 300 B.C.E. and followed this in the Han **era** (206 B.C.E.–C.E. 220) with a new collar that allowed draft animals to pull plows and wagons. The latter did not appear in Europe until some time after C.E. 500. The Chinese also invented the first wheelbarrow and were the first culture to resolve the problem of insect control; by C.E. 300, Chinese citrus growers in southern China were using "red tree ants" to protect their fruit from insects.

The Chinese invented a variety of sophisticated mechanical systems, including the first system of pulleys and winding gears to carry mined materials to the earth's surface. China boasted the first system of canal locks, the first gear system used for milling grain, and the first water-powered mills used for manufacturing. The Chinese talent for industrial innovation included the invention of coke, a key ingredient in iron smelting.

Gunpowder, not introduced to Europe until the late fourteenth century C.E., was invented in China during the Song era (C.E. 960–1279). At first, the Chinese used gunpowder for fireworks featured in ritual displays and public celebrations. They later applied the technology to produce the

TECHNOLOGY AND INVENTIONS

444 B.C.E. Chinese develop accurate solar calendar based on 365.5-day year

300 B.C.E. Chinese develop ox-drawn plow

206 B.C.E.–C.E. 220 Han-era Chinese invent improved collar for draft animals

C.E. 320–550 Indian scholars develop bonesetting, plastic surgery, administer the first inoculations

CA. C.E. 500 Indian mathematician Aryabhata develops theory of gravitation, asserts that Earth and the planets circle the Sun, calculates value of *pi,* accurately measures length of the year and circumference of the earth

CA. C.E. 800–1000 Chinese Song dynasty pioneers new Indian Ocean shipbuilding and navigation technology

CA. C.E. 1000–1100 Chinese invent gunpowder

C.E. 1161 Chinese use explosives for the first time in warfare

CA. C.E. 1300 Printing press invented in Korea

CA. C.E. 1400 Chinese develop moveable type for printing press

first cannons, handguns, land mines, hand grenades, and rockets. The first recorded use of gunpowder in battle occurred in China in C.E. 1161.

ASTRONOMY, MATHEMATICS, AND MEDICINE

Chinese astronomers had developed an accurate calendar by 444 B.C.E., based on a year of 365.5 days. The Indian astronomer Aryabhata (C.E. 476–550) used his astronomical and mathematical calculations of the rotation of the earth to determine a year to be 365 days, 6 hours, 12 minutes, and 30 seconds (the precise value is 365 days and 6 hours). Aryabhata, whose studies were collected in his *Aryabhatiya* manuscript, made other significant discoveries. He was the first to explain the lunar and solar eclipses, he calculated *pi* at 3.1416, and he determined that the earth's circumference was 24,835 miles (39,970 km; just 0.2 percent off the precise distance). He was the first to develop a theory of gravity and he theorized that the earth and planets revolve around the sun—1,000 years before Nicolaus Copernicus (who knew of Aryabhata's prior studies) proposed the same theory in the West.

In addition to Aryabhata's calculation of *pi,* Indian mathematicians produced the Indian numbering system, called "Arabic" because Europeans imported it secondhand from the Middle East in the tenth century C.E. This system, universally used today, was much simpler and easier to use than the cumbersome system of Roman numerals used in Europe. Indians are also credited with developing the concept of zero, devising the decimal system, and calculating square roots and trigonometric functions.

Indian scholars based in Gupta-era hospitals (ca. C.E. 320–550) invented bonesetting and plastic surgery and administered the first inoculations, using an injection of cowpox serum to prevent smallpox. Chinese scholars developed their own precise anatomical knowledge and studied the principles of hygiene to promote longer life. The Chinese also studied pharmaceutical uses of plants and minerals. Chinese researchers were the first to write texts on forensic medicine and the first to propose that fingerprints might be used as a form of identification.

PRINTING

Scholars credit the Chinese with producing the first paper during the Han era, and with developing moveable type, which they were using by the fourteenth century C.E. By the tenth century C.E., Chinese could buy woodblock-printed copies of the Confucian and Buddhist classics, printed on bamboo

TURNING POINT

The Concept of Zero

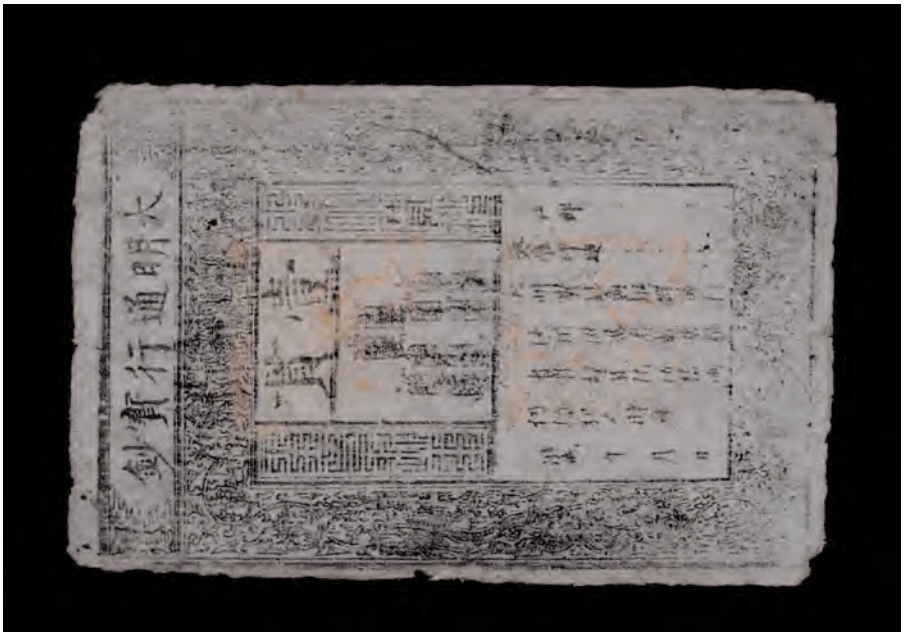
Although Indian mathematicians had developed a decimal system that used zero as a number and placeholder by C.E. 600, the concept of zero is much older. Some scholars argue that the need for the mathematical zero arose in the Gupta **era** (C.E. 320–550) because of the introduction at that time of the Chinese abacus, a device for mathematical calculations. The abacus contained several columns, most strung with beads for counting, but one left empty; scholars who embrace this theory argue that zero provided a written symbol for the empty column. Others argue that the use of zero arose as a response to the need for more accurate written calculations.

The Indian mathematician Aryabhata (C.E. 476–550) used the number system that became known as "Arabic numerals," adding the word *kha* to differentiate numerical position, and his word would become the name for zero. In C.E. 628, the Indian mathematician Brahmagupta (C.E. 598–668) provided the rules for arithmetic involving zero and negative numbers. He explained that subtracting a number from itself resulted in zero; he also established that a number multiplied by zero was zero, and that mathematical calculations could produce both positive and negative numbers.

The earliest document to use zero is an **inscription** from Gwalior, south of Delhi, which dates to C.E. 876 and records the dimensions of a garden and the total production of flowers that it could be expected to produce. The inscription includes the numbers 270 and 50, written as they would be today, although the zero in both cases is smaller than the other numbers.

paper that had special additives to repulse insects. These were in high demand among those studying for the Confucian exams. The Chinese printed books, paper currency, and popular consumables, such as playing cards, almanacs, and calendars, in black or in color on printing presses, which the Koreans had previously invented around C.E. 1300.

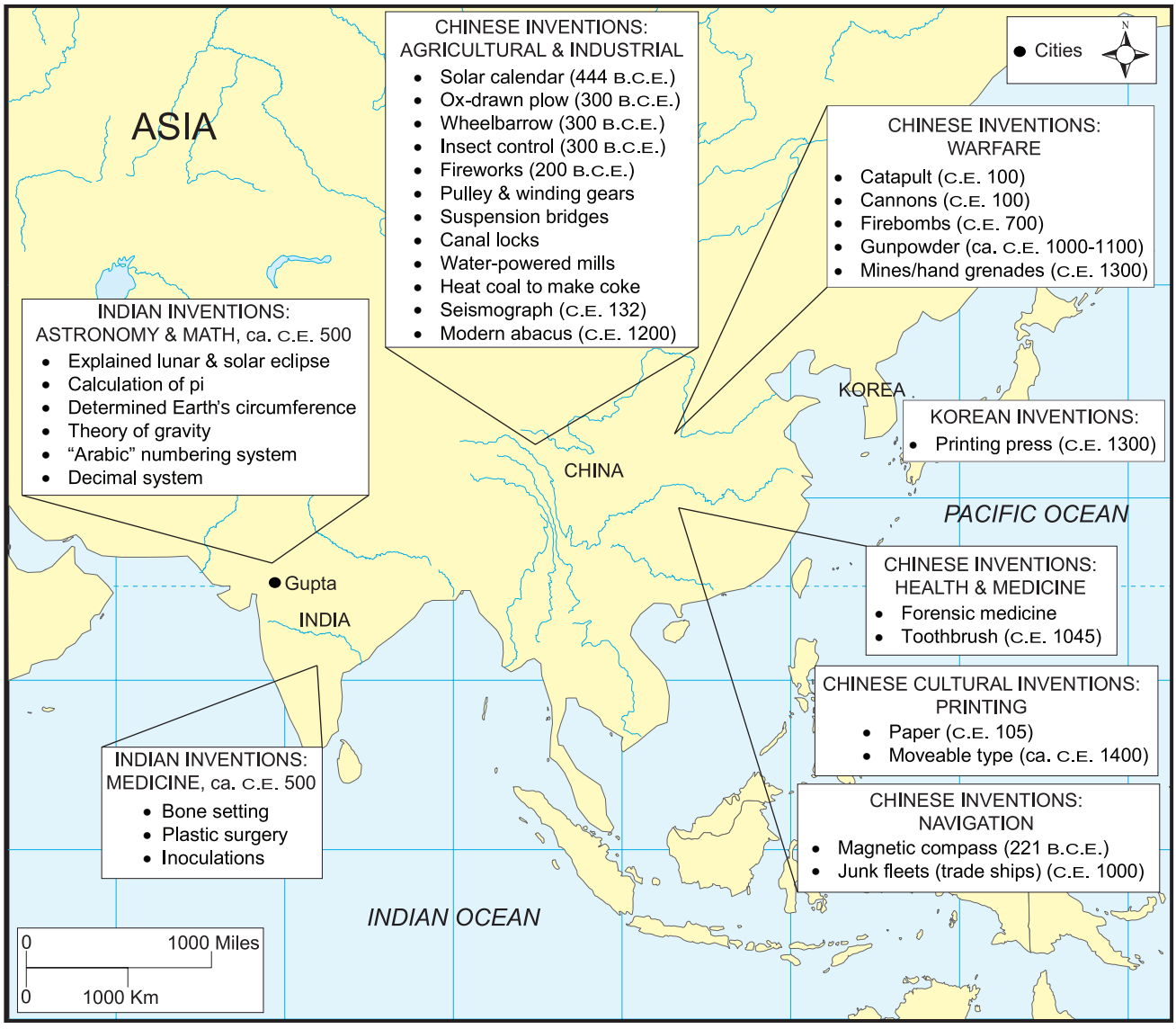
Thanks to moveable type, by the early fourteenth



The Chinese Song dynasty (C.E. 960–1279) was the first state in the world to issue paper currency. By the time this Ming dynasty (C.E. 1368–1644) banknote was circulated in C.E. 1375, inflation had greatly eroded its value; the Ming ended the use of paper money in C.E. 1455. (HIP/Art Resource, NY)

THE SPREAD OF TECHNOLOGY

Many noteworthy achievements took place in mathematics, astronomy, medicine, chemistry, printing, and navigation took place in ancient Asia. Among the long list of inventions that were passed to the West were paper, the printing press, the seismograph, the magnetic compass, and the decimal system.



century C.E., a wide variety of printed books were available to the Chinese public. These included public records written in the formal Chinese language used by the government as well as inexpensive publications written in local languages. However, the large number of Chinese language characters (between 45,000 and 75,000) discouraged use of this early moveable type. One fourteenth-century C.E. gazetteer printed using this method needed 60,000 pieces of type and took two years to produce.

NAVIGATION

Asian navigation responded to the opportunities of the Indian Ocean trade routes. During the ninth and tenth centuries C.E., the Song **dynasty** sponsored efforts to help exploit these routes, such as the creation of detailed maps of routes, and the development of the magnetic compass to assist in navigation. This was also the era in which the Chinese began to develop the ship that would become known as the junk. By the late eleventh century C.E.,

TURNING POINT

The First Seismograph

In C.E. 132, Zhang Heng (C.E. 78–139), royal astronomer to the Chinese emperor, invented the world's first device to warn of earthquakes. Zhang's invention, which preceded the first such development in the West by more than 1,600 years, consisted of a cast bronze vase 6 feet (1.8 m) in diameter with dragons projecting from its sides in eight directions, their heads facing upward, each holding a ball in its mouth. Bronze frogs sat with their mouths open under each dragon. When the ground shook, a pendulum hanging inside the vase would swing in the direction in which the earthquake occurred. The pendulum moved a rod that would cause a dragon to release a ball into the waiting mouth of a frog, to show that an earthquake had occurred in the direction of the frog receiving the ball.

This was especially vital information in ancient China, which was subject to many devastating earthquakes. As a consequence of Zhang Heng's invention, the imperial government was able to provide more rapid assistance to earthquake victims in an age in which rapid communication was not available. Chinese legend relates that once the members of the court thought the device had failed when they felt nothing, only to find out from a messenger several days later that there had been an earthquake 400 miles (645 km) away.

Chinese commercial fleets were sailing as far as northern Sumatra, and by the mid-thirteenth century C.E. Chinese junks and traders were widely active in the entire Indian Ocean.

By C.E. 1500, the typical ship constructed in the ports of southern China and Southeast Asia had a carrying capacity of 350 to 500 tons (320 to 455 m tons). Some, such as those used by the Chinese commander Zheng He in his Indian Ocean voyages (C.E. 1405–1433), had a capacity of 1,000 tons (905 m tons). Many Asian ships were built without the use of iron, instead held together by wooden dowels inserted into the seams between the planks. Normally, these ships had multiple layers of hull planks (two to three layers were typical) so that if the outer layer was damaged, the inner layers would maintain the ship's buoyancy. A hybrid ship design, called *junco,* had planking that was fastened to the frame by iron nails, but which was also dowelled together by wooden pegs.

These "hybrid" vessels demonstrate the success of cross-cultural communication common in Asia in the pre-1500 era, when regular exchange of ideas and technology followed in the wake of trade. As Europeans made their way into Asia from the thirteenth century C.E. onward, they were surprised by the variety of Asian technology that was significantly ahead of their own. Accounts from these travelers captured the European public's imagination, and reinforced the popular belief that Asia was a far more civilized place that had much to teach the West.

See also: Agriculture; Society; Tools and Weapons; Zheng He.

FURTHER READING

Chow, Kai-Wing. *Publishing Culture and Power in Early Modern China*. Palo Alto, CA: Stanford University Press, 2004.

Needham, J. *Science in Traditional China*. Cambridge, MA: Harvard University Press, 1981.

Rahman, A. *Development of Philosophy, Science, and Technology in India and Neighboring Civilizations*. New Delhi: Oxford University Press, 1999.

Tools and Weapons

Early Asian civilizations advanced rapidly from the use of stone, wood, and bone tools to implements of bronze, iron, and steel. Highly organized early societies such as Zhou-**era** China (1122/1027–403 B.C.E.) developed innovative tools and weapons that allowed them to exploit the country's natural resources and defend it from invaders. By C.E. 1500, Asian tools and weapons included innovations such as looms and kilns that were critical to local productivity and gunpowder weaponry that was as advanced as that of the contemporary West.

EARLY CHINESE AGRICULTURAL IMPLEMENTS

The Banpo Village archeological site near modern-day Xian provides an example of early Asian agricultural tool culture (ca. 4000 B.C.E.), which depended on spadelike farm tools made of stone or bone. Other sites from this earliest era of settled agriculture also include millstones that were used for husking millet. The era from 770 to 476 B.C.E. marks the beginning of Chinese use of iron tools and beasts of burden to pull plows. Previously, humans pulled primitive plows made of wood, which limited farming to easily plowed areas. New iron plows pulled by cattle were able to plow deeper and thus opened previously uncultivated lands to agriculture. This same era produced better dam-building and water management techniques, as in the Dujiang Dam near modern-day Chengdu in the Sichuan Province and the Canal of the State of Zheng in the Shanxi Province, which supported the opening of new cultivated lands in northwestern China.

By the Han **dynasty** (206 B.C.E.–C.E. 220), iron tools were common, including pliers that are very similar to the same type of tool used today. Han-era metallurgy involved a bellows system made of leather and powered by humans to increase the temperature of an iron furnace. This produced a higher quality iron that was less likely to break under stress when plowing fields. One beneficiary was the triangular iron plowshare, which had a U-shaped board fixed to the rear of the plow to turn over and crush the earth.

Tang dynasty (C.E. 618–907) innovations included the curved-shaft plow and other new tools that further improved cultivation and brought about rapid growth in China's population. Paired with the breast harness, developed around 200 B.C.E., the new Tang plow allowed draft animals to breathe more easily while pulling heavier loads. The plow, which both crushed and plowed the soil, could turn both left and right, and even turn around easily. Another new Tang-era tool was the wheelbarrow, which could carry both people and cargo. Large self-powered bucket carriage waterwheels allowed the lifting of water over riverbanks into adjacent irrigation canals.

CHINESE INDUSTRIAL TOOL INNOVATIONS

During the Han dynasty, Chinese craftsmen produced the first metal calipers, made of bronze. This invention allowed much more precise measurement of small distances, enabling the development of more intricate innovations in metallurgy and craft production. Some of this new capacity to measure was applied to weaving technology. Although the Chinese had woven silk on locally produced looms since roughly 4000 B.C.E., in the Han era new twilled spinning wheels powered by foot peddles were the most advanced weaving apparatus in the world.

Yuan dynasty (C.E. 1279–1368) weavers modified the traditional spinning wheel into a new three-spindle cotton spinning frame. This increased the production of cotton yarn and supported a major increase in China's cotton production, both in terms of the growth of cotton as well as in the weaving of cotton cloth.

The Tang dynasty marked a significant increase

Warrior-nobles called *samurai* used their superior weaponry and tactics to exercise control over Japan from the late twelfth to the mid-nineteenth centuries C.E. The samurai armor shown here was made during the sixteenth century C.E. but actually is modeled after a style popular in the fourteenth century C.E. (Werner Forman/Art Resource, NY)

in the production of porcelain, which the West would later call "china," using new color glazes and more efficient kilns to fire the ceramics. Another new Tang dynasty "tool" was the brass mirror, which was a byproduct of new metallurgy developments using a mixture of silver and tin. Tang bronze mirrors came in a variety of shapes and sizes, and there were other mirrorlike implements, including one that was able to start a fire by reflecting the sun's rays.

WEAPONS

India's Aryan warriors introduced the chariot to Asia about 1600 B.C.E., and it had spread to China by 1100 B.C.E. The Aryans also introduced the shaft-hole axe, which was made of cast iron with an opening for the insertion of a wooden handle. By the twelfth century B.C.E., Chinese elite were being buried dressed in ceremonial bronze armor, which they would have worn in battle. By the Era of Warring States (403–222 B.C.E.), Asian warriors were increasingly using saddles and wooden stirrups more than chariots. The development of better metal technology in the Han dynasty (206 B.C.E.–C.E. 220) led to Asian cavalries employing metal double stirrups. These allowed cavalrymen to better control their horses and provided a stable base from which they might shoot arrows at their opponents while on horseback.

Bows and arrows and spears were the chief armaments of the earliest Asian armies. Infantrymen fought with spears; unlike their early Roman legion contemporaries, they did not fight in close battle formations. Spearmen instead provided a forward defense for archers and crossbowmen standing behind them, shooting arrows or fire arrows at the enemy. The Han crossbow trigger mechanism was the best available in that age. Later, the Han would arm their cavalrymen with compound bows that used simple pulleys to draw or pull them back. The mace, besides being a symbol of authority, was also used as a weapon in battle, for jabbing or hurling and to break the helmets of enemies. Fireballs, missiles, and bombs, used to set fire to enemy camps, were special features of traditional Indian warfare.

Daggers were the so-called personal weapons of soldiers that were carried with them at all times, both on and off the battlefield. They were as much

ceremonial weapons as they were fighting weapons, as demonstrated in their regular inclusion among the ritual items contained in the Chinese dynastic tombs. In terms of design and style, they were undoubtedly the most creative and colorful of all Asian weapons and rank with the Southeast Asian *kris* jagged daggers and Japanese *samurai* swords as uniquely Asian military **artifacts**.

Military strategy in the time of China's Song dynasty (C.E. 960–1279) focused on conquering and defending cities; thus, an extensive science of fortification and siegecraft developed. Use of rockets and other weapons employing gunpowder were common at this time. Following his conquest of China in C.E. 1276–1279, the victorious Mongol leader Genghis Khan, impressed with the technological advantages of the Song army, adopted Song battle technology, adding infantry and naval units to complement his efficient steppe cavalry tactics.

The Ming dynasty (C.E. 1368–1644) warriors made effective use of cannons and other firearms. They learned about firearm warfare from Vietnamese who opposed their brief occupation of Vietnam in the early fifteenth century C.E. Ming rulers subsequently hired Vietnamese instructors to teach Chinese soldiers at a new firearms training facility in Beijing. The Ming effectively used firearm warfare, combined with the rebuilt Great Wall, to defend China against steppe troops until the seventeenth century C.E.

The Song and Ming also developed effective battle fleets to engage in combat and patrol against pirates in the South China Sea. The Ming were able to make calculations about how many fighting forces were necessary, considering the weaponry necessary for battle success, and had the ability to deploy troops in smaller or larger numbers with the correct number of weapons. The West would not have similar battle efficiency until the eighteenth century C.E.

See also: Archeological Discoveries; China; Huns; India; Japan; Java; Mongols; Technology and Inventions.

FURTHER READING

Draeger, Donn F. *The Weapons and Fighting Arts of Indonesia*. Rutland, VT: Tuttle, 2001.

Friday, Karl F. *Samurai, Warfare, and the State in Early Medieval Japan*. New York: Routledge, 2004.

Graff, David A. *Medieval Chinese Warfare, 300–900*. New York: Routledge, 2002.

King, W. L. *Zen and the Way of the Sword*. New York: Oxford University Press, 1993.

Vietnam

Located on the southern border of China, country that has been a vital link between China and Southeast Asia since ancient times. The earliest Vietnamese rice culture developed in the Red River system of northern Vietnam and southern China and culminated in what is popularly called the Dongson culture (ca. 500 B.C.E.–C.E. 43). This culture, which was dominated by regional Sino-Vietnamese family clans, is known for its engraved bronze drums that were widely distributed through the South China Sea region.

A Chinese military victory in C.E. 43 established Vietnam as a government outpost under the Han **dynasty** (206 B.C.E.–C.E. 220). Chinese officials forced Vietnam's landholding elite to abandon their traditional **matriarchal** culture, which favored female leadership and inheritance, in favor of Chinese **patriarchal** family practices. Vietnam's Hanoi-centered civilization acquired a heavy overlay of Chinese culture, including Chinese written language and artistic, philosophical, and political forms.

A civilization that the Chinese called "Funan" emerged in the first century C.E. in the Mekong delta region of southern Vietnam. This civilization survived until the early sixth century C.E. Funan's development and eventual fall were tied to the activities of **maritime** traders who traveled between

India and China, making stopovers in Funan's ports. This trade reached its height after the fall of the Han dynasty in C.E. 220, but Funan's ports quickly declined after the route shifted south to the Strait of Melaka passage between Sumatra and the Malay Peninsula in the fifth century C.E.

By the sixth century C.E., the ports of the Cham civilization located along the central Vietnam coast (known collectively as Champa) took over Funan's position as the favored stopovers of merchants traveling between China and Java and the Strait of Malacca. The Cham realm included ports populated by multiethnic seagoing populations. Upstream rice farmers and highland tribesmen provided food and exotic jungle products to international traders. The Cham culture is noted for the impressive Hindu and Buddhist temples it built at Mi-son near modern-day Danang.

Northern Vietnam remained under Chinese sovereignty until the fall of the Tang dynasty (C.E. 907), when Vietnamese armies prevented the restoration of Chinese rule. Leaders of the newly independent Vietnam Ly state (C.E. 960–1225) partnered with China-trained Mahayana Buddhist monks to establish and administer new government institutions. Minor officials were chosen by examination for the first time in C.E. 1075, and a civil service training institute and an imperial academy were set up in C.E. 1076. In C.E. 1089, a fixed **hierarchy** of Buddhist and **secular** state officials was established, with nine degrees of civil and military scholar officials.

By the thirteenth century C.E., however, the Buddhist church had become a threat to Vietnamese secular leadership. Vietnam's Tran dynasty (C.E. 1225–1400), as well as the subsequent Le dynasty (C.E. 1428–1527), began to recruit newly trained Confucian scholars from among their Vietnamese landed **aristocracy** to replace Buddhist monks as state bureaucrats. Vietnam's emperors implemented their own version of the Chinese Confucian examination system. Unlike the Chinese exams, which were open to all qualified applicants, the Vietnamese system admitted only the sons of Vietnam's landed elite.

From the thirteenth to the fifteenth centuries C.E., the Vietnamese repelled repeated Chinese **annexation** attempts, as well as periodic raids by their Cham neighbors. The multiple wars between the Vietnamese and the Chams eventually resulted in the fall of Champa to victorious Vietnamese forces in C.E. 1471. The Vietnamese seized Champa's resources and carried off significant numbers of the Cham population as slaves to settle and develop new northern Vietnam rice lands. Shortly thereafter, in C.E. 1527, the Le state fragmented into regional courts ruled by rival factions of the royal family. As a result, Vietnam would lack effective central authority until 1800.

See also: China; Confucianism; Indian Ocean Trade; Khmer Empire; Mongols; Slavery.

FURTHER READING

Lieberman, Victor. *Strange Parallels: Southeast Asia in Global Context, c. 800–1830*. Cambridge: Cambridge University Press, 2003.

Taylor, Keith W. *The Birth of Vietnam*. Berkeley: University of California Press,

Zheng He (ca. C.E. 1371–1433)

Military commander and leader between C.E. 1405 and 1433 of seven major Chinese **maritime** expeditions into the Indian Ocean during the reign of the Ming **dynasty** (C.E. 1368–1644). Zheng He's expeditions asserted China's political, cultural, and commercial interests through Southeast Asia and beyond, to Arabia and the east coast of Africa.

Zheng He, from a Muslim family living in south China's Yunnan Province, was captured by Ming forces when he was 10 years old. He was trained to enter the Ming court's exclusive eunuch military

guard. By the time he reached adulthood, he is said to have been 7 feet (2.1 m) tall and, with his booming voice, was a natural leader.

Zheng He rose to power as a military commander of the emperor Yongle (r. 1402–1424), who ordered Zheng He to build a fleet of ships to sail into the South China Sea region to project Chinese power there. His first voyage, which departed in C.E. 1405, consisted of 27,870 men (soldiers, scholars, scientists, and **artisans**) traveling on 317 ships, including supply ships and troop ships, some as large as 1,000 tons (910 m tons). After leaving the South China Sea region, Zheng He's fleet passed through the Strait of Melaka that separates the Malay Peninsula from Sumatra, and sailed west to Sri Lanka and to Calicut, on the southwestern India coast.

On this and subsequent voyages, the Ming fleet rarely intervened militarily in local affairs; the display of Zheng He's massive fleet of ships was sufficient to impress upon locals the power of the Chinese emperor. Zheng He's mission was to promote peace and to eliminate the regional piracy that threatened the flow of international luxury products (such as spices, rare woods, incense, ivory, and cotton) to China in exchange for China's silks, porcelain, and horses. He returned to the Ming court two years after his departure with diplomatic gifts, political hostages, and **tribute** collected from foreign rulers.

Zheng He was so successful that the emperor commissioned him to make six subsequent voyages. On his second (C.E. 1407–1409) and third voyages (C.E. 1409–1411), he returned to southern Asia, but on the fourth voyage (C.E. 1413–1415), he sailed beyond India to Hormuz (in Persia) on the Persian Gulf. On his fifth voyage (C.E. 1417–1419), he reached Aden on the Saudi Arabian Peninsula and several eastern African coast ports. Among the exotic commodities he brought back were two giraffes, which became the prized residents of a new court zoo at Beijing.

After the death of Emperor Yongle, the court of the new emperor, Xuande (r. 1425–1435), argued that Zheng He's voyages were overly expensive. Court officials also expressed concern that the voyages yielded advantages to the commercial classes, who might gain sufficient power to challenge the authority of the Confucian gentry. Also, in their view, China needed to shift its financial resources to build up its troop strength on its northern border to defend against a potential invasion from the steppes. After Zheng He's death in C.E. 1433, China's naval expeditions abruptly ended.

Today Zheng He is hailed by the Chinese. Because Zheng He was popularly **deified** after his death as a great hero of China's past, he is still portrayed in regional ancestral temple icons as a potential spirit who might be appealed to in hopes of resolving modern-day problems.

See also: China; Confucianism; Indian Ocean Trade; Melaka; *Pax Sinica*.

FURTHER READING

Levathes, Louise. *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–33*. New York: Simon and Schuster, 1994.

Ptak, Roderich. *China and the Asian Seas: Trade, Travel, and Visions of the Others (1400–1750)*. Brookfield, VT: Ashgate, 1998.

Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationship A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretation and analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history, cultural An analysis of history in terms of a people's culture, or way of life, including investigating patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political An analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

history of science and technology Study of the evolution of scientific discoveries and technological advancements

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remain constant or show marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radiocarbon dating A test for determining the approximate age of an object or artifact by measuring the number of carbon 14 atoms in that object

social history See history, social

Key Terms Found in A to Z Entries

absolutism The exercise of complete and unrestricted power by a ruler or government

agrarian Related to agriculture or farming

alluvial Associated with sediment deposited by rivers in flood plains or deltas

annex To incorporate or make part of

animism General belief that everything possesses a soul or a spirit

antiquity The ancient past, particularly referring to the history of the Western world before the fall of the Roman Empire in C.E. 476

archeologist A scientist who studies prehistoric people and their culture

archipelago A group of islands

aristocracy The nobility or ruling class in a society

aristocratic In a society, belonging to the nobility or the ruling class, whose wealth is generally based on land and whose power is passed on from one generation to another

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament; archeologists study artifacts of ancient cultures to try to learn more about them

artisan A skilled craftsperson or worker who practices a trade or handicraft

assimilate To conform or adjust to the customs or attitudes of a group or society

autonomous Independent; self-governing

Bronze Age Historical period marked by introduction of bronze for tools and weapons

celestial Relating to heaven or the divine

city-state A city and the area immediately around it

cosmology One's beliefs about the nature and structure of the universe

courtier Person who attends a sovereign at a royal court

deified Worshiped as a god

doctrine A set of principles presented for acceptance or belief, such as by a religious, political, or philosophical group

dynasty Succession of rulers, usually from several generations, from the same line or family

egalitarian Characterized by social equality

equinox Literally "equal night"; an astronomical term referring to the two days each year in which daylight and darkness are approximately equal; usually March 21 (spring equinox) and September 21 (autumnal equinox)

excavate To dig out of the earth; uncover

hereditary Passed from one generation to another

hierarchical Describing an organization, especially of persons, that ranks people by authority or importance; societies that are hierarchical have distinct social classes, some of which are considered to be superior to others

hierarchy Ranking by authority or importance

humanoid Creature possessing human characteristics

Ice Age An extended period of extremely low temperatures; there have been many ice ages in the history of the earth

icon A religious image or portrait

iconography The use of pictorial images to represent gods or divinities

indigenous Native to a particular place

inscription Writing carved or engraved on a surface such as a coin, tablet, or stone monument

Iron Age Historical period, following the Bronze Age, and marked by the introduction of ironworking technology

maritime Relating to the ocean or ocean travel

matriarchal A type of society ruled by female leaders

matrilineal Tracing of descent through the mother

monarch A hereditary sovereign or ruler

monarchy Form of government in which power is in the hands of a hereditary ruler

monotheism Belief in a single deity

Neolithic Period Also known as the New Stone Age, an interval in human culture from about 10,000 to 3000 B.C.E., starting with the introduction of agriculture and ending with the introduction of the first metal implements and weapons

nomads People who travel seasonally to follow sources of food

pantheon All the gods of a particular people, or, a temple dedicated to all the gods of a particular people

pastoral Characterized by a rural life; peaceful, simple, and natural

patriarchal A type of society ruled by male leaders, where men typically possess sole religious, political, and domestic authority

patrilineal Tracing descent through the father

patron One who supports or sponsors a person or activity

pictograph A pictorial representation of a word or idea

polytheism Worship of a number of deities, often representations of natural forces, such as the rain or the wind

relief A type of sculpture in which partially raised figures project from a flat background, giving the appearance of dimension

Sanskrit Indo-European tongue that is the language of Indian religion and classical literature

secular Related to worldly things, as opposed to religion and a church

seminomadic People who travel seasonally to follow sources of food but also practice limited agriculture

shaman Human intermediary between the natural and supernatural worlds

solstice The longest (summer solstice, June 21) and shortest (winter solstice, December 21) days of the year

staple Basic or necessary item of food

stratification Division into different levels or orders based on rank

textiles Items made of cloth or fabric, or the fibers used to weave a fabric

theocracy Form of government in which power is held by a priestly class

tribute Payment from one nation or group to another as a sign of respect or to acknowledge submission

urbanization The growth and development of cities

vassal A person who owes loyalty or service to a more powerful individual in a social system or context

Selected Bibliography

Abu-Lughod, Janet. *Before European Hegemony: The World System 1250–1350*. New York: Oxford University Press, 1991.

Andaya, Barbara Watson, and Leonard Y. Andaya. *A History of Malaysia*. Honolulu: University of Hawaii Press, 2001.

"Asian History Timeline." http://www.asianinfo.org/asianinfo/history/history_timeline.htm. Accessed 31 May 2007.

"Asian Studies Resources." http://asia.rice.edu/resources.cfm. Accessed 31 May 2007.

Attwood, Bain. *Telling the Truth About Aboriginal History*. Crows Nest, Australia: Allen and Unwin, 2005.

Basham, A.L. *Cultural History of India*. New York: Oxford University Press, 1999.

———. *The Wonder That Was India*. New York: Grove Press, 1959.

Belich, James. *Making Peoples: A History of New Zealanders from Polynesian Settlement to the End of the Nineteenth Century*. Honolulu: University of Hawaii Press, 1996.

Bellwood, Peter S. *Conquest of the Pacific: The Prehistory of Southeast Asia and Oceana*. Oxford: Oxford University Press, 1979.

———. *First Farmers: The Origins of Agricultural Societies*. Malden, MA: Blackwell, 2005.

———. *Polynesians: Prehistory of an Island People*. London: Thames and Hudson, 1987.

———. *Prehistory of the Indo-Malaysian Archipelago*. Orlando, FL: Academic Press, 1985.

Benton, Michael J., et al. *The Age of Dinosaurs in Russia and Mongolia*. Cambridge: Cambridge University Press, 2003.

Blainey, Geoffrey. *Triumph of the Nomads: A History of Aboriginal Australia*. Woodstock, NY: Overlook, 1976.

Blusse, Leonard, and Natalie Everts, eds. *The Formosan Encounter: Notes on Formosa's Aboriginal Society*. 2 vols. Taipei: Shung Ye Museum of Formosan Aborigines, 2000.

Boulnois, Luce. *Silk Road: Monks, Warriors, and Merchants*. Translated by Helen Loveday. New York: Norton (for Odyssey Publications, Hong Kong), 2006.

Bowker, John, ed. *World Religions: The Great Faiths Explored and Explained*. London and New York: DK, 1997.

Brook, Timothy. *The Chinese State in Ming Society*. New York: RoutledgeCurzon, 2005.

Chandler, David P. *A History of Cambodia*. Boulder, CO: Westview Press, 2000.

Chang, Chun-shu. *The Rise of the Chinese Empire: Frontier, Immigration, and Empire in Han China, 129 B.C.–A.D. 107*. Ann Arbor: University of Michigan Press, 2006.

Chapuis, Oscar. *A History of Vietnam: From Hong Bang to Tu Duc*. Westport, CT: Greenwood Press, 1995.

Chase, Kenneth. *Firearms: A Global History to 1700*. Cambridge: Cambridge University Press, 2003.

Chow, Kai-Wing. *Publishing Culture and Power in Early Modern China*. Palo Alto, CA: Stanford University Press, 2004.

Cleary, Thomas. *Practical Taoism*. Boston: Shambhala, 1996.

Coe, Michael D. *Angkor and the Khmer Civilization*. London: Thames and Hudson, 2005.

Cohn, Bernard S. *India: The Social Anthropology of a Civilization*. Englewood Cliffs, NJ: Prentice Hall, 1971.

Craven, Roy C. *Indian Art*. London: Thames and Hudson, 1997.

Creese, Helen. *Women of the Kakawin World: Marriage and Sexuality in the Indic Courts of Java and Bali*. Armonk, NY: Sharpe, 2004.

Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.

Davis, Edward L. *Society and the Supernatural in Song China*. Honolulu: University of Hawaii Press, 2001.

De Bary, William Theodore, et al., eds. *Sources of Japanese Tradition*. Vol. 1. New York: Columbia University Press, 2001.

De Bary, William Theodore, and Irene Bloom, compilers. *Sources of Chinese Tradition*. 2nd ed. New York: Columbia University Press, 1999.

DeSilva, K.M. *A History of Sri Lanka*. New York: Penguin Books, 2005.

Di Cosmo, Nicola. *Ancient China and its Enemies: The Rise of Nomadic Power in East Asian History*. Cambridge: Cambridge University Press, 2004.

———. *Warfare in Inner Asian History: 500–1800*. Boston: Brill, 2001.

Draeger, Donn F. *The Weapons and Fighting Arts of Indonesia*. Rutland, VT: Tuttle, 2001.

Dulby, Andrew. *Dangerous Tastes: The Story of Spices*. Berkeley: University of California Press, 2002.

Duus, Peter. *Feudalism in Japan*. New York: McGraw Hill, 1993.

Eaton, Richard M., ed. *India's Islamic Tradition, 711–1750*. New Delhi, India: Oxford University Press, 2003.

Ebrey, Patricia Buckley. *China: A Cultural, Social, and Political History*. Boston: Houghton Mifflin, 2006.

———. *Confucian and Family Ritual in Imperial China*. Princeton, NJ: Princeton University Press, 1992.

Ebrey, Patricia Buckley, and Peter N. Gregory, eds. *Religion and Society in Tang and Sung China*. Honolulu: University of Hawaii Press, 1993.

Eckert, Carter J., et al. *Korea Old and New*. Cambridge, MA: Harvard University Press, 1990.

Edstrom, Bert. *Turning Points in Japanese History*. London: Routledge, 2002.

Ellwood, Robert S., and Richard Pilgrim. *Japanese Religion: A Cultural Perspective*. Englewood Cliffs, NJ: Prentice Hall, 1984.

Elman, B. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.

Embree, Ainslee, ed. *Sources of Indian Tradition*. 2nd ed. New York: Columbia University Press, 1988.

Friday, Karl F. *Samurai, Warfare, and the State in Early Medieval Japan*. New York: Routledge, 2004.

Gilbert, Erik, and Jonathan Reynolds. *Trading Tastes, Commodities, and Cultural Exchange to 1750*. Upper Saddle River, NJ: Pearson Prentice Hall, 2006.

Gombrich, Richard F. *How Buddhism Began: The Conditioned Genesis of the Early Teachings*. London: Routledge, 2006.

Graff, David A. *Medieval Chinese Warfare, 300–900*. New York: Routledge, 2002.

Grousset, Rene. *The Empire of the Steppes: A History of Central Asia*. New Brunswick, NJ: Rutgers University Press, 1988.

Hall, Kenneth R. *Maritime Trade and State Development in Early Southeast Asia*. Honolulu: University of Hawaii Press, 1985.

Halpern, Charles. *Russia and the Golden Horde: The Mongol Impact on Medieval Russian History*. Bloomington: Indiana University Press, 1987.

Hardy, Grant, and Anne Behnke Kinney. *The Establishment of the Han Empire and Imperial China*. Westport, CT: Greenwood, 2005.

Higham, Charles. *Archeology of Mainland Southeast Asia*. Cambridge: Cambridge University Press, 1989.

———. *Civilization of Angkor*. Berkeley: University of California Press, 2002.

Hildinger, Erik. *Warriors of the Steppe: A Military History of Central Asia, 500 B.C. to A.D. 1700*. New York: DaCapo Press, 2001.

Holcombe, C. *The Genesis of East Asia, 221 B.C. to A.D. 907*. Honolulu: University of Hawaii Press, 2001.

Hooker, Virginia Matheson, *A Short History of Malaysia*. Sydney, Australia: Allen and Unwin, 2003.

Hucker, Charles O. *China's Imperial Past: An Introduction to Chinese History and Culture*. Palo Alto, CA: Stanford University Press, 1994.

Imamura, Keiji. *Prehistoric Japan: New Perspective on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

Inden, Ronald B. *Imagining India*. Cambridge, MA: Blackwell, 1990.

Irwin, Geoffrey. *The Prehistoric Exploration and Colonization of the Pacific*. Cambridge: Cambridge University Press, 1994.

Jackson, William. *Vijayanagara Voices: Exploring South Indian History and Hindu Literature*. Aldershot, UK: Ashgate, 2005.

Jansen, Marius B. *The Emergence of Meiji Japan*. Cambridge: Cambridge University Press, 2006.

———. *Warrior Rule in Japan*. Cambridge: Cambridge University Press, 2004.

"Japanese History Resources." http://www.snowcrest.net/jmike/japan.html. Accessed 8 Mar 2007.

Juneja, Monica. *Architecture in Medieval India: Forms, Contexts, Histories*. Andhra Pradesh, India: Orient Longman, 2001.

Kahn, Paul, and Francis Woodman. *Secret History of the Mongols. The Origin of Chingis Khan*. Boston: Cheng and Tsui, 1998.

Kasulis, Thomas P. *Shinto*. Honolulu: University of Hawaii Press, 2005.

Keay, John, *India: A History*. New York: Grove Press, 2000.

Kennedy, A.R., and G.L. Possehl, *Studies in the Archeology and Paleo-Anthropology of South Asia*. New Delhi, India: Oxford University Press, 1984.

Kim, D.K. *The History of Korea*. Westport, CT: Greenwood Press, 2005.

Kinney, Ann R. *Worshipping Siva and Buddha: The Temple Art of East Java*. Honolulu: University of Hawaii Press, 2003.

Kirkland, Russell. *Taoism: The Enduring Tradition*. London: Routledge, 2004.

Klostermeier, Klaus K. *A Survey of Hinduism*. 2nd ed. Albany: State University of New York Press, 1994.

Kohn, Livia. *Daoism and Chinese Culture*. Cambridge, MA: Three Pines Press, 2001.

Kulke, Hermann, and Dietmar Rothermund. *A History of India*. London: Routledge, 1998.

Kutcher, Norman. *Mourning in Late Imperial China: Filial Piety and the State*. Cambridge: Cambridge University Press, 1999.

Lee, Ki-Baik, et al. *A New History of Korea*. Cambridge, MA: Harvard University Press, 2005.

Lee, Peter H., Yongho Ch'oe, and Hugh H.W. Kang. *Sources of Korean Tradition*. New York: Columbia University Press, 1996.

Levathes, Louise. *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–33*. New York: Simon and Schuster, 1994.

Lieberman, Victor. *Strange Parallels: Southeast Asia in Global Context, c. 800–1830*. Cambridge: Cambridge University Press, 2003.

Lipner, J.J. *Hindus*. New York: Routledge, 1993.

Lopez, Donald S., Jr. *The Story of Buddhism: A Concise Guide to its History and Teachings*. New York: HarperCollins, 2001.

Ludden, David, ed. *Agricultural Production and South Asian History*. New York: Oxford University Press, 2005.

Mair, V., ed. *Columbia History of Chinese Literature*. New York: Columbia University Press, 2002.

Mann, S., and Y. Chang. *Under Confucian Eyes: Writings on Gender in Chinese History*. Berkeley: University of California Press, 2001.

Mason, Colin. *A Short History of Asia: Stone Age to 2000 A.D.* London: Palgrave Macmillan, 2000.

Mason, Penelope. *History of Japanese Art*. Upper Saddle River, NJ: Pearson Education, 2005.

McCurry, Steve. *Monsoon*. London: Thames and Hudson, 1997.

Michaels, Axel. *Hinduism*. Translated by Barbara Harshav. Princeton, NJ: Princeton University Press, 2003.

Miyazaki, Ichisada. *China's Examination Hell: Civil Service Exams of Imperial China*. Translated by Conrad Schirokauer. New Haven, CT: Yale University Press, 1981.

Morgan, K.W. *Reaching for the Moon: Asian Religious Paths*. Chambersburg, PA: Anima, 1991.

Morrison, Kathleen D., and Laura L. Junker, eds. *Forager-Traders in South and Southeast Asia*. Cambridge, MA: Cambridge University Press, 2002.

Morton, W. Scott, et al. *Japan: Its History and Culture*. New York: McGraw-Hill, 2004.

Mulvaney, John, and Johan Kamminga. *Prehistory of Australia*. Washington, DC: Smithsonian Institution Press, 1999.

Murphey, Rhoads. *A History of Asia*. 5th ed. New York: Longman, 2005.

Needham, J. *Science in Traditional China*. Cambridge, MA: Harvard University Press, 1981.

Nelson, John K. *A Year in the Life of a Shinto Shrine*. Seattle: University of Washington Press, 1996.

Nilakanta Sastri, K.A. *A History of South India*. Madras, India: Oxford University Press, 1972.

Nile, Richard. *Australian Aborigines*. New York: Steck-Vaughn, 1993.

Ortner, Jon, Ian W. Mabbett, et al. *Angkor: Celestial Temples of the Khmer*. New York: Abbeville Press, 2002.

Pai, H. *Constructing Korean Origins*. Cambridge, MA: Harvard University Press, 2000.

Peebles, Patrick. *The History of Sri Lanka*. Westport, CT: Greenwood Press, 2006.

Quanchi, Max, and Ron Adams. *Cultural Contact in the Pacific*. Cambridge: Cambridge University Press, 1993.

Rahman, A. *Development of Philosophy, Science, and Technology in India and Neighboring Civilizations*. New Delhi, India: Oxford University Press, 1999.

Ratchnevsky, Paul. *Genghis Khan: His Life and Legacy*. Translated and edited by Thomas Nivison Haining. Oxford: Basil Blackwell, 1992.

Ricklefs, M.C. *Mystic Synthesis in Java: A History of Islamization from the Fourteenth to the Early Nineteenth Centuries*. Norwalk, CT: EastBridge Press, 2006.

Risso, Patricia. *Merchants and Faith: Muslim Commerce and Culture in the Indian Ocean*. Boulder, CO: Westview Press, 1995.

Roberts, J.M. *Prehistory and the First Civilizations*. New York: Oxford University Press, 2002.

Robinson, R.H., and W.L. Johnson. *The Buddhist Religion*. Belmont, CA: Wadsworth, 1988.

Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.

Saunders, J.J. *History of the Mongol Conquests*. Philadelphia: University of Pennsylvania Press, 2001.

Schirokauer, Conrad, David Lurie, and Suzanne Gay. *A Brief History of Japanese Civilization*. Boston: Wadsworth, 2005.

Schwartz, Benjamin I. *World of Thought in Ancient China*. Cambridge, MA: Harvard University Press, 1985.

Sen, Tansen. *Buddhism, Diplomacy, and Trade: The Realignment of Sino-Indian Relations, 600–1400*. Honolulu: University of Hawaii Press, 2003.

Skrine, Bennett, and Edward Denison Ross. *The Heart of Asia: A History of Russian Turkestan and the Central Asian Khanates from the Earliest Times*. Boston: Adamant, 2001.

Smith, Frederick M. *The Self Possessed: Deity and Spirit Possession in South Asian Literature and Civilization*. New York: Columbia University Press, 2006.

Smith, W. Ramsay. *Myths and Legends of the Australian Aborigines*. Mineola, NY: Dover, 2003.

Snellgrove, David. *Angkor: Before and After: Cultural History of the Khmers*. Boston: Weatherhill, 2004.

Soucek, Svatopluk. *A History of Inner Asia*. New York: Cambridge University Press, 2001.

Stanley-Baker, Joan. *Japanese Art*. London: Thames and Hudson, 2000.

Thompson, E.A. *The Huns*. Cambridge, MA: Blackwell, 1999.

Torday, Laszlo. *Mounted Archers: The Beginnings of Central Asian History*. Durham, NC: Durham Academic Press, 1998.

Van Bremen, Jan. *Asian Anthropology*. New York: Routledge, 2005.

Varley, H. Paul. *Japanese Culture*. Honolulu: University of Hawaii Press, 2000.

Wang, Bin. *The Asian Monsoon*. New York: Springer-Praxis, 2006.

Wolpert, Stanley. *A New History of India*. New York: Oxford University Press, 2005.

Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2004.

Wyatt, David. *Thailand: A Short History*. New Haven, CT: Yale University Press, 1984.

Yang, Xiaoneng. *New Perspectives on China's Past*. New Haven, CT: Yale University Press, 2004.

Index

A
Aboriginal peoples, 1–2, 18–22, 21*m*
Abu Said, 75
Agrarian raids, 98, 115
Agriculture
  aboriginal peoples, 1
  animism and, 87–88
  dry rice, 2–3, 3*p*
  early communities, xiii, 2, 8–9
  irrigation, 4–5, 8, 60, 98, 103
  monsoons and, 3–4, 76
  sawah cultivation, 2, 4, 54
  shifting cultivation, 2–3
  social systems and, 4, 5, 82, 97
  swidden cultivation, 2, 8
  technology and inventions, 1, 5, 103, 105*t*, 107*m*, 109
  terraced farming, 3*p*, 4, 5
  wet rice, 3–5, 3*p*, 54, 60
  See also specific country/region
Aibak, Qutb-ud-din, 49, 53
Akhmar, 40
Akihito, 94
Alexander the Great, xiv, 16, 48
Alluvial soil, 3, 115
Alphabet. *See* Language
Amaterasu, 89, 94
Analects (Confucius), 34
Angkor, 60–61
Angkor Thom Bayon, 6, 17, 60–61
Angkor Wat, 6–7, 7*p*, 17, 60
Animism, 87–88
  aboriginal peoples, 1
  Australia, 91, 93
  burial objects and, 98
  Hinduism and, 43*p*
  Indo-Aryan, 48
  Polynesia, 86, 91
  Shinto . *See* Shinto
Anuradhapura, 103
Archeological discoveries, 8–13, 10*p*, 11*m*
Architecture. *See* Art and architecture
Aristocrats
  China, 12–13, 27, 28, 37
  Japan, 56
  Korea, 13, 62, 63
  spice trade and, 101
  Vietnam, 112
Arjuna, 44
Art and architecture
  Angkor Wat, 6–7, 7*p*
  Australia, 19*p*, 20
  Buddhist, 15–18, 48, 90*p*
  China
    canals, 29*p*, 30
    feng shui, 14
    Great Wall, 12, 13
    imperial tombs, 14–15
    landscape painting, 15
    Longmen Grotto complex, 18
    Song dynasty, 32
    urban, 14
  Hindu, 17, 90*p*
  India, 15–16, 17
  Indus Valley, 98
  Japan, 57, 58*p*, 94*p*
  Java, 17
  Maori, 82, 83*p*
  Micronesia, 72
  rock paintings, 19*p*, 20
  Southeast Asia, 17
  Sri Lanka, 17
  Yi dynasty, 63
  See also Pottery; Statues; Temples/shrines
Artha, 99
Arthasastra, 42, 65*t*, 67
Aryabhata, 106
Aryans, 41, 42*t*, 47–48, 110
Ashikaga Shotunate, 57
Asoka (Mauryan king), 15–16, 48, 64
Astronomy, 105
Attila the Hun, 45–46, 45*p*
August Ones, 78
Australia
  aboriginal peoples, 1
  archeological discoveries, 8
  art, 19*p*, 20
  early peoples and civilizations, xv, 18–22
  European colonization, 21–22
  fossils, 20
  geographic and climate change, 18
  migratory routes, 21*m*
  myths, 91
  religion, 20, 91, 93
  society and culture, 19–20
  timeline, 22*t*
Ayudhya (Thailand), 61, 104

B
Bamiyan (Afghanistan), 17, 24
Banpo, 8–9, 9*t*, 109
Battle fleets, 111
Bayon, 6
Beijing Man, 8, 9*t*
Bhagavad Gita, 44
Bhakti devotionalism, 17, 44
Bodhisattvas, 6, 26
Bone-rank system, 62
Bonesetting, 105*t*,
Borobudur, 17
Bows, 73, 110
Bradshaw Cave (Australia), 20
Brahmagupta, 106
Brahman, 42, 43, 66
Brahmin class, 41–42, 48, 100*p*
Bronze
  drums, 8, 9*t*
  mirrors, 110
  tools, 8, 13, 26, 110
Buddha statues, 16, 17, 23*p*, 24, 48
Buddha Tooth Relic, 103
Buddhism
  art and architecture, 15–18, 48, 90*p*
  doctrine, 24, 88–89
  Hinduism compared with, 24–25, 88
  literature and, 67–69
  reincarnation, 89
  restriction of, 63
  sects and splits, 24, 25–26, 89
  Shinto and, 89–91, 93
  Siddhartha Gautama, 16, 22, 25
  spread of, 22–24, 30, 54–55, 89–90, 92*m*
  See also Buddha statues
Burial objects
  China, 9*t*, 12, 15, 98, 110
  Japan, 13
  Korea, 13
  statues, 10, 10*p*, 13, 15
  See also Burial sites and tombs
Burial sites and tombs
  China, 10, 10*p*, 12, 14–15, 98
  Japan, 13, 54
  Korea, 13
  Micronesia, 72
  paintings, 15
  Thailand, 8
  See also Burial objects

C
Calendar, 105*t*, 106
Calligraphy, 65
Cambodia. *See* Khmer Empire
Canals, 72, 103
  agricultural, 5, 60
  Grand Canal, 29*p*, 30
Cannons, 73, 105, 111
Canoes, 85
Caste system, 41, 42–43, 48, 97, 99
Cham, 60, 112
Chan Buddhist sect, 24
Chariots, 10, 110
China
  aboriginal peoples, 1
  agriculture, xiii, 8–9, 26
  archeological discoveries, 8–13
  aristocrats, 12–13, 27, 28, 37
  art and architecture . *See* Art and architecture
  Beijing Man, 8, 9*t*
  civil service exams, 28, 30, 34, 101
  classical age, 27, 32
  dynasties
    fat cat syndrome, 35
    Han, 29–30, 67, 96
    Mandate of Heaven, 69–70, 77
    map of, 31*m*
    Ming, 32–33, 70, 85, 111
    Pax Sinica, 84–85
    Period of Five, 32
    Qin, 13, 28–29

Shang, xiii–xiv, 12, 26
Song, 32, 69, 111
Sui, 30
Tang . *See* Tang dynasty
timelines, 27*t*
Xia, 26
Yuan, 32, 69, 75
Zhou, xiv, 26–28, 69
early peoples and civilizations, xiv, 26–28
family life, 35, 36–37, 97–98, 101
foot binding, 36–37
gender roles, 36–37, 100–101
government, 28–29, 30, 32
law, 37–38
literature, 67–69
material culture, 39
Mongol conquest of, 32, 73, 75
myths and epics, 77–80
religion
animism, 87, 88
blend of, 92
Buddhism, 24, 30
Confucianism, xiv, 27, 30, 33–35, 88
Daoism, 27, 30, 88
folk deities, 77–79
Islam, 52, 53
slavery, 96–97
social systems, 14, 97–98, 100–101
technology and inventions, 30, 32, 105–110, 107*m*, 109–110
timeline, 27*t*
tombs/burial sites, 10, 10*p*, 12, 14–15, 98
trade, 50–51, 84–85, 96
Vietnam and, 112
warlords, 30
weapons and military strategy, 110–111
written language, 64–65
Zheng He, xv, 32, 51, 70, 112–113
Choe family (Korea), 62
Choson (Korea), 62
City-states, 27
Civil service exams
China, 28, 30, 34, 101
Korea, 62, 63
Vietnam, 112
Classical age
China, 27, 32
India, 49
Colonization, xvi, 21–22, 48
Concubines, 36, 97
Confucian Classics, 67
Confucian Legalism, 29
Confucianism, xiv, 27, 30, 88
architecture and, 14
beliefs and traditions, 33, 34–35
Korea and, 62, 63
literature and, 68–69
schools of thought, 33–34
social order, 97
spread of, 84, 112
Confucius, 14, 34, 70
Cook, James, 21, 22*t*
Creation myths, 80
Aryan, 41, 42
Australia, 20
China, 80
Japan, 77, 80
Maori, 82–83
See also Myths and epics
Cremation, 8, 9*t*
Culture. *See* Society and culture
Currency. *See* Money

D

Daggers, 98, 110
Daibutsu (Great Buddha), 16
Dams, 109
Daoism, 27, 30, 88
Death sentences, 38
Deities, folk, 77–79
Delhi Sultanate, 49, 53
Dharma, 41, 42, 99
Dharmasastra, 37, 41, 42, 99
Dingo, domestication of, 19, 22*t*
Divine wind, 57
Dongson culture, 8
Dowries, 99
Dreamtime, 19*p*, 20, 91
Dynasties
China . *See* China
India, 49
Java, 59
Korea, 62–63
Mandate of Heaven, 69–70, 77
Turk, 49, 53
Vietnam, 112

E

Eightfold Way, 24
Epics. *See* Myths and epics
Eunuch corps, 112
Executions, 38

F

Family life
aboriginal, 1
China, 35, 36–37, 97–98, 101
India, 36–37
Japan, 101
Fat cat syndrome, 35
Feng shui, 14
Firearms training, 111
Five Dynasties and Ten Kingdoms, 27*t*, 31*m*, 32
Five Emperors, 78
Folk deities, 77–79
Foot binding, 36–37
Fossils, 20
Four Noble Truths, 24
Fujiwara clan, 56
Funan, 112

G

Gautama, Siddhartha, 16, 22, 25
Gazou, 29
Gender roles
aboriginal, 1
China, 36–37, 100–101
India, 36–37
Islam and, 53
Micronesia, 71
Mongol, 74
Southeast Asia, 101
Genghis Kahn, 73–75, 111
Goa, xvi
Golden Horde, 40–41, 52, 74*m*, 75
See also Mongols
Gracile populations, 8, 22*t*
Grand Canal, 29*p*, 30
Great Wall of China, 12, 13
Greek culture, 17, 48
Greek epics, 78
Guanyin, 78–79
Gunpowder, 105, 111
Gupta Empire (India), xiv, 36, 46, 49, 67

H

Han dynasty (China), 27*t*, 29–30, 31*m*, 67, 95
Han Gazou. *See* Gazou
Han Wudi. *See* Wudi
Harappa (Indus Valley), 98
Harsa, 49
Henna, 37*p*
Hierarchical social systems, 97
agriculture and, 4
China, 14, 28
Confucianism, 33, 97
creation myths and, 80
India, 41, 42–43, 48
Korea, 62
Hinduism
art and architecture, 17, 90*p*
Buddhism compared with, 24–25, 88
caste system, 97, 99
doctrine, 42–44, 88
Gupta Empire, 49
literature and, 67
marriage rituals, 37*p*
origins, 41, 43*p*, 88
reincarnation, 42, 43, 89
spread of, 92*m*
timeline, 42*t*
Vedic **era**, 41–42
Hirohito, 94
Homo erectus, 8, 9*t*
Homo sapiens, 8
Human habitation, earliest evidence of, xiii, 8
Huns, 44–46, 45*p*
Hunter-gatherers
aboriginal, 1, 18–19, 54
Maori, 81
Micronesian, 71
Hwarang, 62
Hydraulic society, 4, 8

I

Icon worship, 48

Iconography, 16, 17, 91
Inari, 77
India
  aboriginal peoples, 1
  art and architecture, 15–17, 48
  caste system, 41, 42–43, 48, 97, 99
  classical age, 49
  cultural influences, 36, 47–49
  dynasties, 49
  early peoples and civilizations, xiv–xv, 46–48
  gender and family life, 36–37
  Gupta Empire, xiv, 36, 46, 49, 67
  language and literature, 49, 64, 65*t,* 66–69
  law, 38–39
  marriage, 36, 37*p,* 99
  material culture, 39
  Mauryans, 15–16, 48
  myths and epics, 78, 80–81
  religion
    Aryan, 48
    Buddhism, 15–17, 24, 48, 88–89, 92–93
    folk deities, 78
    Hinduism, 49, 88, 93
    Islam, 52–53, 93
  technology and inventions, 106, 107*m*
  temples, 17, 91
  timeline, 47*t*
  trade, 50–51
Indian Ocean trade. *See* Trade
Indus Valley, 47, 98–99
Inoculations, 105*t,* 105
Inscriptions, 15, 48, 60, 64, 106
Iron tools, 110–111
Irrigation systems. *See* Agriculture
Ise (Japan), 93, 95
Islam, spread of, xv, 52–53, 59–60, 71, 92*m,* 93
Izumo shrine (Japan), 93

J
Jade Emperor, 78
Japan
  aboriginal peoples, 1
  agriculture, 13, 54
  archeological sites, 13
  art and architecture, 57, 58*p,* 94*p*
  early peoples and civilizations, xv, 54–56
  imperial rule, 56
  literature, 65–66, 79
  myths and epics, 77, 79, 80, 91
  religion
    animism, 87
    blend of, 58*p,* 91, 93, 94
    Buddhism, 24, 54–55, 56, 89–90, 94
    folk deities, 77
    Shinto . *See* Shinto
  samurais . *See* Samurais
  shoguns, 56–58
  slavery, 96–97
  social system, 101
  temples/shrines, 16, 55, 56, 58*p,* 94*p*
  timeline, 55*t*
  tombs, 13, 54
  weapons, 98, 111*p*
  written language, 65–66, 66*p*
Java
  agriculture, 59
  art and architecture, 17
  early peoples and civilizations, 59–60
  epics, 81
  religion, 24, 53, 59–60
  temples, 17, 59
  trade, 51, 59
  weapons, 98
Java Man, 8, 9*t*
Jayavarman II, 60
Jayavarman VII, 6, 60
Jimmu, 94
Jomon culture, 9*t,* 13, 54, 87
Junks, 107–108

K
Kalibangan (Indus Valley), 98
Kalinga (India), 48
Kama, 99
Kamakura Shogunate, 57
Kamatari, 55–56
Kami, 54, 89, 93–95
Kamikaze ("divine wind"), 57
Khmer Empire, xv
  agriculture, 3, 60
  Angkor Wat, 6–7, 7*p,* 17, 60
  decline of, 61
  Sukhothai and, 103
  temples, 60–61
Kofun period (Japan), 54
Koguryo kingdom (Korea), 62
Korea
  agriculture, 13
  archeological sites, 13
  civil service exams, 62, 63
  dynasties, 62–63
  epics, 79
  Mongol conquest, 62, 75
  origins, 61–62
  religion, 63, 92*m*
  technology and inventions, 107*m*
  tombs, 13
  warlords, 62
  written language, 65
Koryo dynasty (Korea), 62
Kosrae (Micronesia), 72
Kris, 98, 111
Krisna, 44
Kublai Khan, 32, 57, 75
Kupe, 81
Kyoto (Japan), 56

L
Lake Mungo, xiii, 8, 9*t,* 22*t*
Lament, The, 65*t,* 67
Land bridges, xiii
Language
  Korean alphabet, 63
  linguistic groups, 68*m*
  literature, 64, 66–69
  timeline, 65*t*
  women's, 36
  written, 64–66
  See also Myths and epics; specific country/region
Lao Tzu, 88
Law
  China, 37–38
  Hindu, 41, 42
  India, 38–39
  Mongol, 73–74
Le dynasty (Vietnam), 112
Legalists, 34
Li, 99
Li Sao (The Lament), 65*t,* 67
Li Si, 28–29
Li Yuan, 30
Literature. *See* Language
Longmen Grotto (China), 18
Longshan culture, 9, 9*t,* 11–12
Luoyang (China), 24

M
Magnetic compass, 107
Mahabharata, 44, 65*t,* 67, 78, 80
Mahabodhi temple complex (India), 16
Mahayana Buddhism, 25–26, 89
Majapahit state (Java), 59–60
Mandate of Heaven, 69–70, 77
Maori, 81–83
Maps
  aboriginal migratory routes, 21*m*
  archeological sites, 11*m*
  Chinese dynasties, 31*m*
  linguistic groups, 68*m*
  Mongol empire, 74*m*
  religions, 92*m*
  technological spread, 107*m*
  trade routes, 50*m*
Marae, 82
Maritime trade. *See* Trade
Marriage
  Australia, 19–20
  China, 36
  India, 36, 37*p,* 99
  Yi dynasty (Korea), 63
Material culture, 1, 39
Mathematics, 105*t,* 106
Mauryan era (India), 15–16, 48
Medicine, 105*t,* 106
Melaka, 70–71
Mencius, 33
Metallurgy, 109–110
Micronesia, xv, 71–72
Middle East, trade, 50, 51
Military strategy, 72, 111
Ming, concept of, 70
Ming dynasty (China), 27*t,* 32–33, 70, 85, 111
Mohenjo-Daro (Indus Valley), 98
Money
  dowries, 99
  paper currency, 106*p*
  shells, 12

Mongols
culture, 72–73, 75
Genghis Kahn, 73–75, 111
Golden Horde, 40–41, 52, 74*m*
invasions/conquests, 32, 57, 62, 73, 75
Kublai Khan, 32, 57, 75
law, 73–74
legacy, 75
Ogedei, 75
regions, 74*m*, 74–75
religion, 40, 75
trade, 75, 96
weapons, 72–73, 111
Monsoons, 3–4, 51, 76
Moveable type, 105*t*, 107
Murasaki Shikibu, 66
Myths and epics
Bhagavad Gita, 44
China, 77–80
folk deities and spirits, 77–78
Greek, 78
India, 78, 80–81
Japan, 77, 79, 80
Li Sao, 65*t*, 67
Mahabharata, 44, 65*t*, 67, 78, 80
Maori, 81, 82–83
Ramayana, 67, 78, 80
Rig Veda, 41, 42*t*, 77, 88
Samguksagi, 79
Tale of Genji, 65–66, 65*t*, 79, 79*p*
Tale of Heike, 79
See also Creation myths

N
Nan Madol (Micronesia), 72
Nara (Japan), 16, 55*t*, 56
Navigation, 105*t*, 107*m*, 108
New Zealand, 81–83
Noa, 82
Nyungar people (Australia), 20

O
Observatories, 11
Ogedei, 75
Ox-drawn plow, 104, 105*t*

P
Paekche kingdom (Korea), 62
Pagodas, 18
Pali, 64
Pan Gu, 80
Paper, 105–106
Paper currency. *See* Money
Pax Sinica, 84–85
Pi, 105*t*
Pictograms, 66*p*
Pictographs, 64, 65*t*
Plastic surgery, 105*t*, 106
Pliers, 109
Plows, 105*t*, 109
Pohnpei (Micronesia), 72
Polynesia, xv, 81, 85–86, 91
Porcelain, 110
Pottery
burial objects, 98
early Korean, 13
Indus Valley, 98
Jomon culture, 54
Longshan culture, 9
porcelain, 110
Printing, 105*t*, 106–107, 107*m*
Pulley systems, 104

Q
Qin dynasty (China), 13, 27*t*, 28–29, 31*m*
Qin Shihuangdi. *See* Shihuangdi
Qin wall. *See* Great Wall of China
Qu Yuan, 67

R
Ramayana, 67, 78, 80
Reincarnation, 42, 43, 89
Religion, 87–93
aboriginal peoples, 1, 20
literature and, 66–67, 94
map of, 92*m*
myth and, 77
See also Animism; Buddhism; Confucianism; Daoism; Hinduism; Islam; Myths and epics; Shinto; Temples/shrines; specific country/region
Rig Veda, 41, 42*t*, 77, 88
Ritual cremation, 8, 9*t*
Romance of the Three Kingdoms, 79

S
Salvation, 42–43
Samguksagi, 79
Samurais
armor, 110*p*
bonded, 96
decentralization of, 56, 57
religion, 24
swords, 98
Sanjaya, 59
Sanskrit, 16, 48, 64
Sanskritization, 48
Saudeleurs, 72
Sawah cultivation, 2, 4, 54
Secularism, xvi, 36
Seismographs, 108
Sejong, 63
Seminomadic peoples
agrarian raids, 11, 97–98
cultural influence of, xiv
Golden Horde, 40
Huns, 45
indigenous Australians, 18
Mongols, 72
Shang dynasty (China), xiii–xiv, 12, 26, 27*t*, 31*m*
Shihuangdi
first Qin emperor, 28
Great Wall, 12, 13
tomb of, 10, 10*p*, 15
See also Qin dynasty (China)
Shinto
Buddhism and, 89–90, 93
folk deities, 77
kami, 54, 89–90, 93–94
origins, 89, 93–95
regions, 92*m*
rituals, 95
shrines, 93, 94*p*, 95
uji clans and, 54
Ship construction, 105*t*, 109
Shoguns, xv, 56–58
Shomu, 16
Shotoku, 54–55
Siddhartha, 16, 22, 25
Silk Road. *See* Trade
Silla **era** (Korea), 62
Sinhalese, 102–103
Slave dynasty (India), 49
Slavery, 96–97
Society and culture
aboriginal, 1
agriculture and, 4, 5, 82, 97
hierarchical. *See* **Hierarchical** social systems
Islam and, 53
Maori, 82
Micronesia, 71
Mongol, 73–74, 75
Polynesia, 85–86
social class, 97, 99, 101
theocracies, 98
trade and, 96
village, 72, 97–98
See also Family life; Gender roles; Law; Marriage; Material culture; specific country/region
Song dynasty (China), 27*t*, 31*m*, 32, 69, 111
Soul
rebirth of, 42, 43, 89
of weapons, 98
Southeast Asia
agriculture, 3, 8
art and architecture, 17
early peoples and civilizations, xv
law, 37
religion, 24, 52, 53
social system, 101
trade, 50–51, 102
written language, 64
Spears, 110
Spice trade, 51, 102
Spirit worship, 77, 87, 89
Sri Lanka, 17, 23, 51, 101, 103
Sri Maharaja, 70–71
Statues
Buddhist, 16–18, 23*p*, 24, 48
burial, 10, 10*p*, 13, 15
Daibutsu (Great Buddha), 16
India, 16–17
Japan, 16
Longmen Grotto, 18
Sri Lanka, 17
terra-cotta soldiers, 10, 10*p*
Thailand, 23*p*
Storytelling, 20
Stupas, 16, 17, 18, 103

Sufism, 53
Sui dynasty (China), 27*t*, 30, 31*m*
Sukhothai (Thailand), 104
Suryavarman I, 60
Suryavarman II, 6, 60
Swidden cultivation, 2, 8
Swords, samurai, 98

T
Taiho Code, 56
Tale of Genji, 65–66, 65*t*, 79, 79*p*
Tales of Heike, 79
Tamerlane, 40, 75
Tang dynasty (China), 27*t*, 31*m*
  art and architecture, 14–15
  collapse of, 31
  Cosmopolitan Age, 30
  law, 38
  literature, 68–69
  technology and inventions, 110
Tantra, 26
Tao te Ching, 88
Taosi, 9*t*, 12
Tapu, 82
Technology and inventions
  aboriginal peoples, 1
  agricultural, 1, 5, 103, 105, 107*m*, 109–110
  astronomy, 106
  canals, 5, 29*p*, 30, 72, 103
  canoes, 85
  gunpowder, 105, 111
  irrigation systems, 103
  mathematical, 106
  medical, 106
  navigation, 108
  observatories, 12
  printing, 106–107
  pulleys, 105
  seismographs, 108
  ship construction, 109
  spread of, 107*m*
  timeline, 105*t*
  weaving, 110
  See also Tools; Weapons; specific country/region
Temples/shrines
  Cambodia (Angkor Wat), 6–7, 7*p*, 17, 60
  India, 16, 17, 18, 90*p*, 91
  Japan, 16, 55, 56, 58*p*, 94*p*, 95
  Java, 17, 59
  Maori, 83*p*
Temuchin, 73
Terra-cotta soldiers, 10, 10*p*
Terraced farming. *See* Agriculture
Thailand
  agriculture, 3, 8
  archeological sites, 8
  attack on Angkor, 61
  Buddha statue, 23*p*
  Sukhothai and Ayudhya, 104
Theocracy, 98
Theravada Buddhism, 25, 89, 103, 104
Three August Ones, 78
Three Collections, 24
Three Jewels, 24
Timelines
  archeological discoveries, 9*t*
  Australia, 22*t*
  China, 27*t*
  Hinduism, 42*t*
  India, 47*t*
  Japan, 55*t*
  Khmer Empire, 61*t*
  language and writing, 65*t*
  technology and inventions, 105*t*
Todaiji temple (Japan), 16, 56
Tokugawa Shogunate, 58
Tombs. *See* Burial sites and tombs
Tools
  aboriginal peoples, 1, 19
  agricultural, 109
  bronze, 8, 13, 26, 110
  Homo erectus, 8
  iron, 13, 109–110
  Japan, 13
  Mongols, 72
  See also Technology and inventions; Weapons
Torii, 94*p*, 95
Torres Strait Islanders, 18, 22*t*
Tosho-gu Shrine, 58*p*
Trade, xv–xvi
  Buddhism and, 23–24
  Indian Ocean, xv, 49–51, 70–71
  Islam and, 52, 71
  map of routes, 50*m*
  maritime, 24, 30, 49–51
  Melaka, 70–71
  Ming dynasty, 33
  navigation and maps, 107–108
  Silk Road, 23–24, 50*m*, 74*m*, 95–96
  spice, 51, 102
  See also specific country/region
Tran dynasty (Vietnam), 112
Tribute
  to Ayudhya, 104
  to China, 63, 84
  to Huns, 46
  to Mongols, 73
  to Zheng He, 113
Turkish dynasties, 49, 53

U
Uji clans (Japan), 54–55
Upanishads, 42–43, 65*t*, 66–67
Urbanization, 5, 14
Uttar Pradesh temple (India), 90*p*

V
Vajrayana Buddhism, 26, 89
Vedas, 41, 66
Vedic **era**, 41
Vegetarianism, 43
Vietnam, 111–112
  agriculture, 3–4, 8
  archeological sites, 8
  firearm warfare, 111
Village societies, 72, 97–98

W
Wagyl, 20
Wang Kon, 62
Wang Mang, 30
Warlords
  China, 30
  Korea, 62
Warring States, Era of the, 27*t*, 28
Water management, 109
Weapons
  aboriginal Australians, 19
  aboriginal peoples, 1
  battle fleets, 111
  bows, 73, 110
  bronze, 8, 13, 110
  cannons, 73, 105, 111
  chariots, 10, 110
  daggers, 98, 110
  early Southeast Asia, 8
  Javanese Kris, 98
  Mongols, 72–73
  rockets, 111
  samurai swords, 98
  spears, 110
  See also Military strategy; Technology and inventions; Tools
Weaving, 109
Wet rice. *See* Agriculture
Wheelbarrows, 104, 109
Women. *See* Gender roles
Woomera, 19
Writing. *See* Language, written
Wu Ding, 12
Wudi, 29–30, 62, 95

X
Xia dynasty (China), 26, 27*t*, 31*m*

Y
Yamato clan (Japan), xv, 54–55, 55*t*, 94
Yangban, 63
Yangshao culture, 9, 9*t*, 87
Yap (Micronesia), 71, 72
Yayoi period (Japan), 13, 54
Yi dynasty (Korea), 63
Yi Song-gye, 62–63
Yin and yang, 80
Yin (China), 12, 26
Yoga, 43, 44
Yuan dynasty (China), 27*t*, 31*m*, 32, 69, 75

Z
Zen Buddhism, 24
Zero, concept of, 106
Zhang Heng, 108
Zheng He, xv, 32, 51, 70, 112–113
Zhou dynasty (China), xiv, 26–28, 27*t*, 69